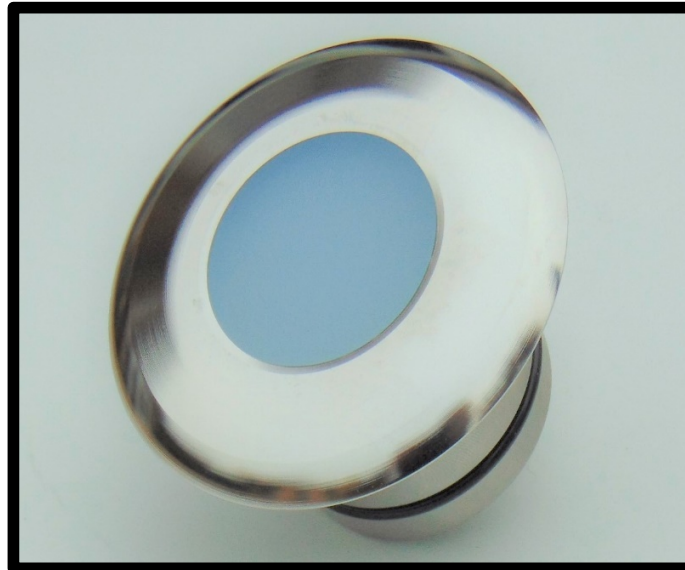


Water-Tec.co.uk

Operation Manual

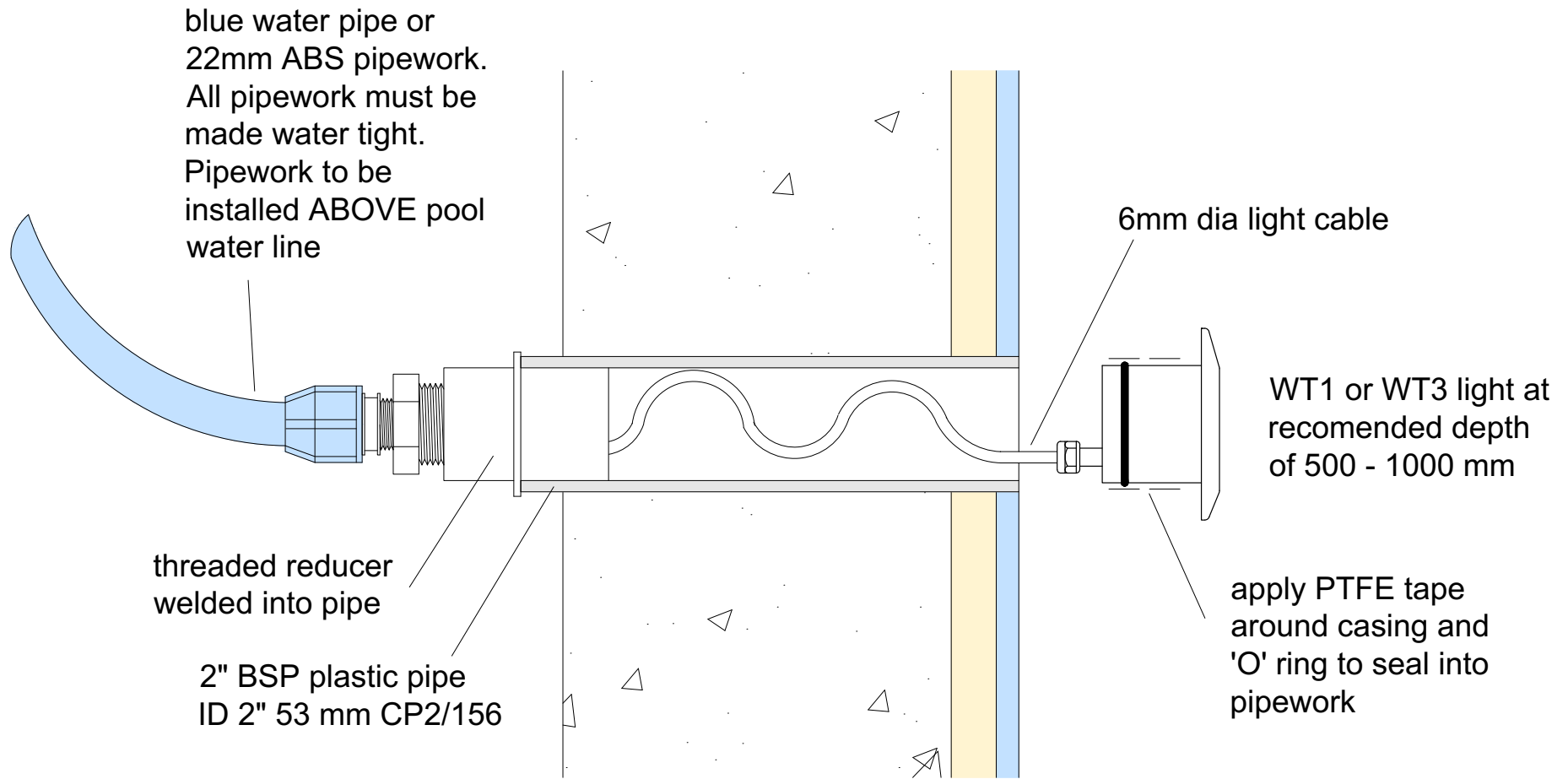


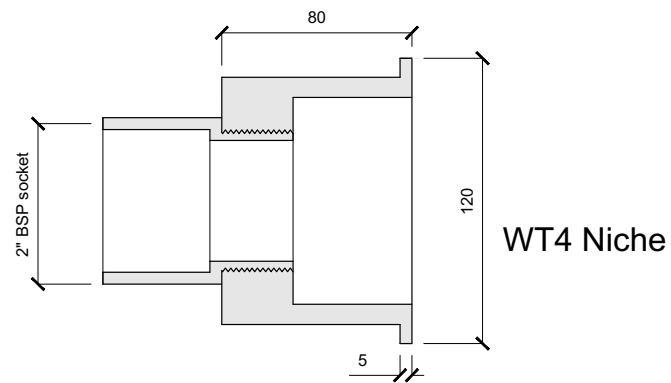
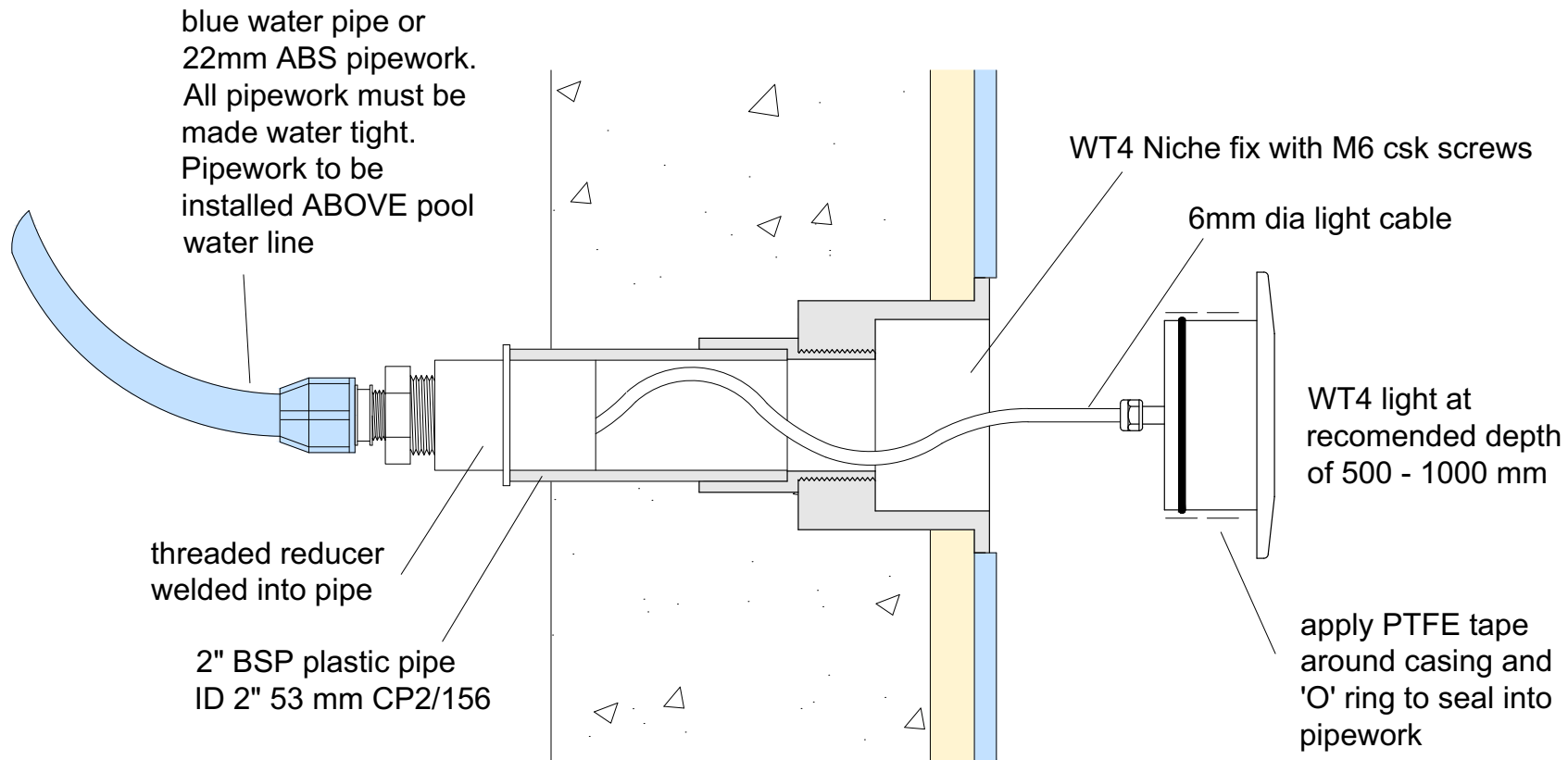
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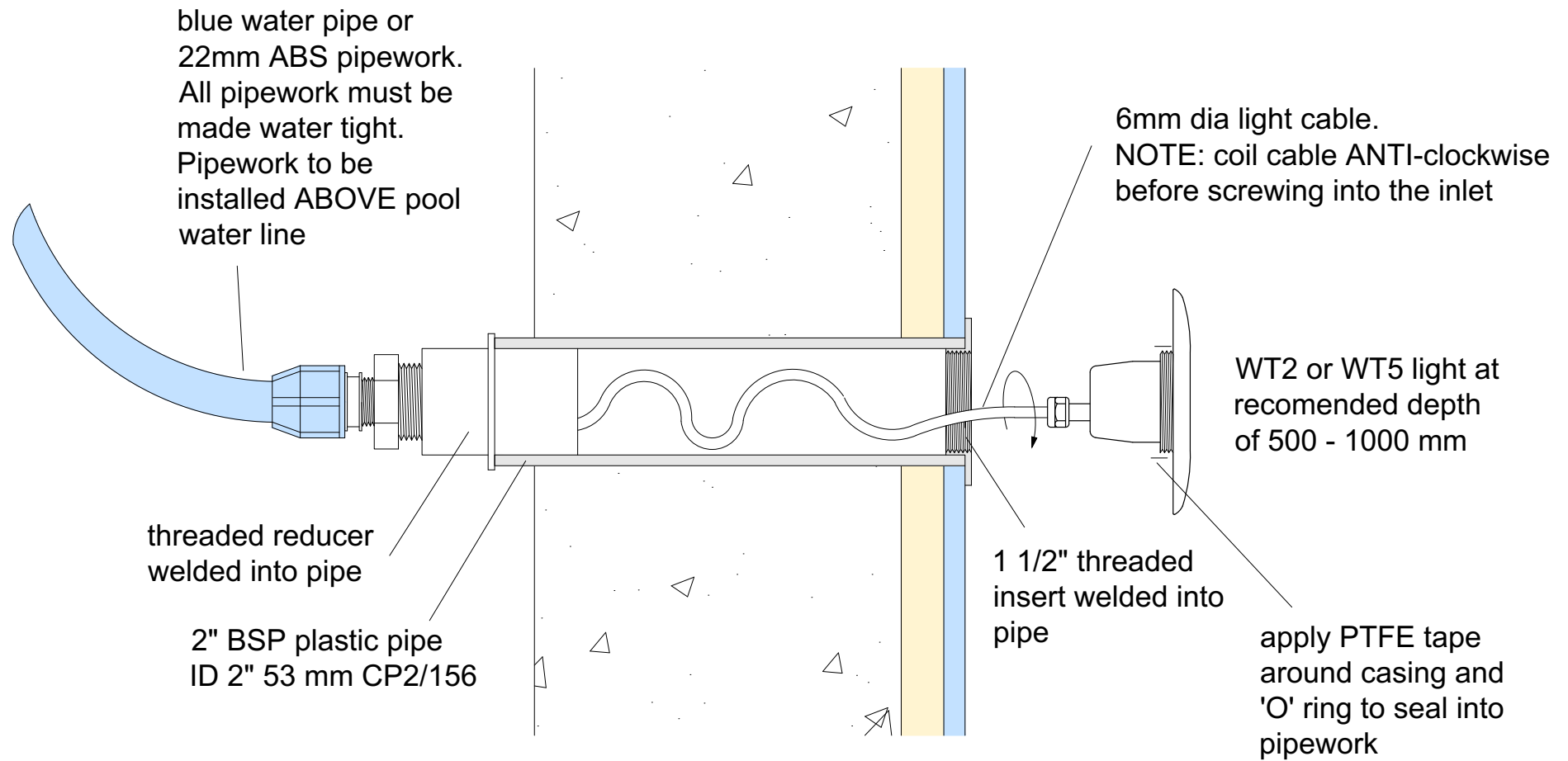
1. Cover
2. Index.
3. WT1-3 Installation.
4. WT4 Installation.
5. WT2-5 Installation.
6. WT RGB Driver Box wiring.
7. WT4-5 RGB Driver Box
8. WT1-2 RGB Pre-Wired Driver Box
9. WT-RGB Lamp.
10. WT-Wiring to DMX/Switch/Bluetooth.
11. WT4-5 White Driver Box Wiring.
12. WT1-2 White Driver Box Wiring.
13. WT1-2-4-5 White Driver Box.
14. WT1-2 Single driver.
15. WT4-5 Single Driver.
16. WT3 White to Dim switch.
17. WT3 White Driver Box Wiring.
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19. WT3 White Driver Box.
20. WT1-2-3 RGB spacing.
21. WT1-2-4-5 White spacing.
22. Joining cables.
23. 150W, 1 Output, Switch Mode Power Supply.
24. How to connect to Freecolour Phone App.
25. How to connect to Magic home App.
26. Bluetooth connection.
27. Remote Control.
28. Touch Dim Switch.

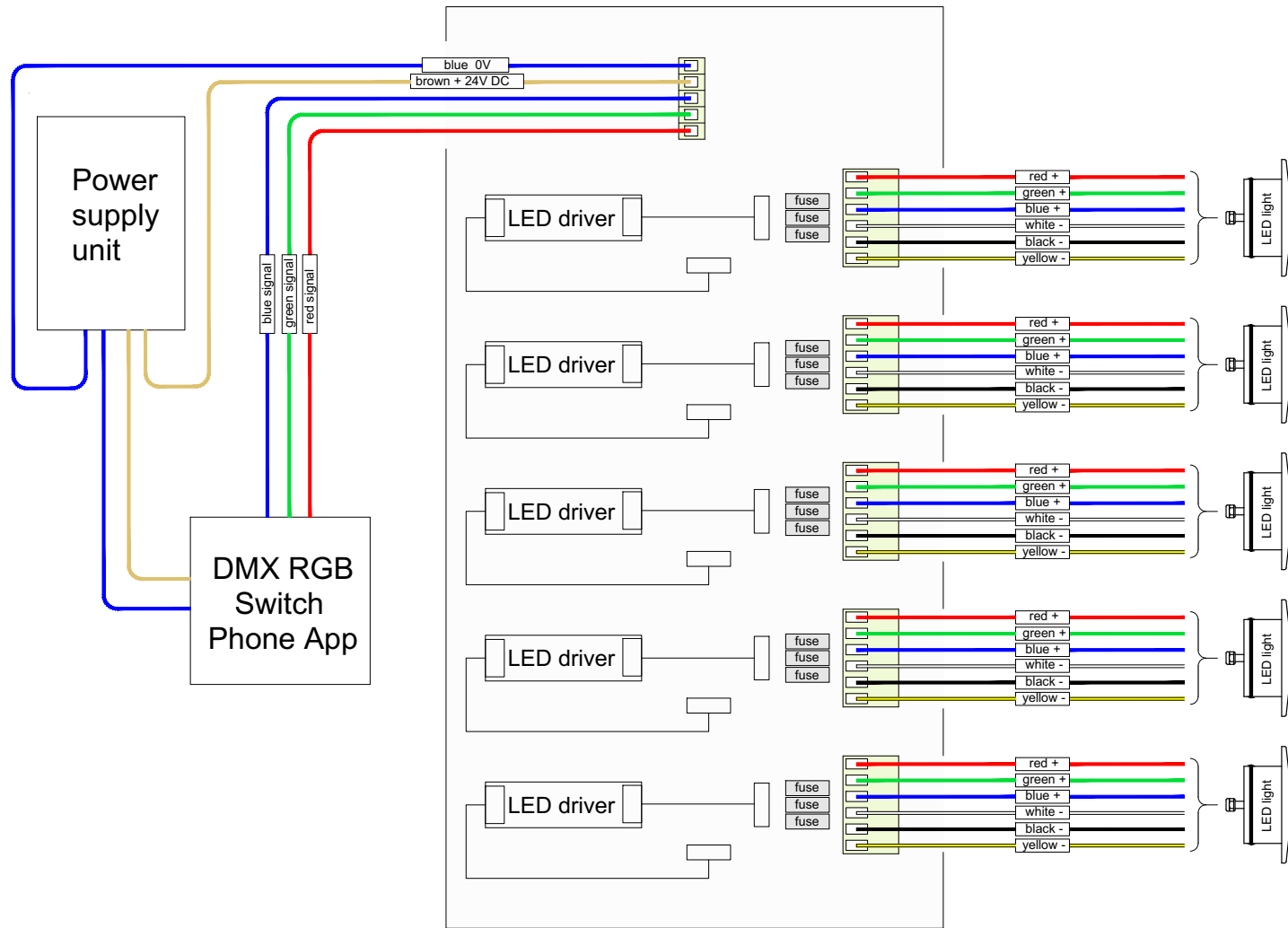
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29. RGB Touch Panel.
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32. WT1-Techincal information.
33. WT2-Techincal information.
34. WT3-Techincal information.
35. WT4-Techincal information.
36. WT5-Techincal information.
37. WT4-Niche.
38. Trouble shooting white.
39. Trouble shooting RGB.
40. RGB Test switch.
41. WT-Terms and Conditions.
42. WT-Terms and Conditions.





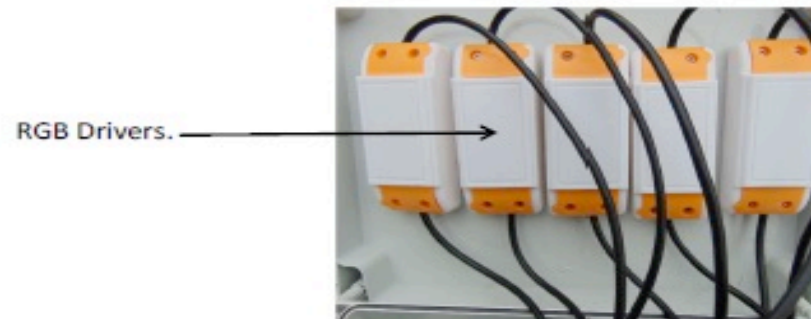
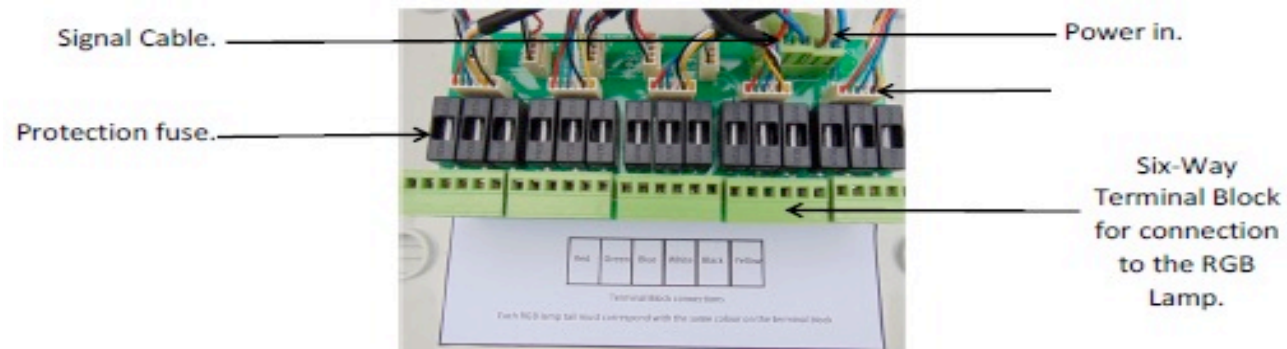


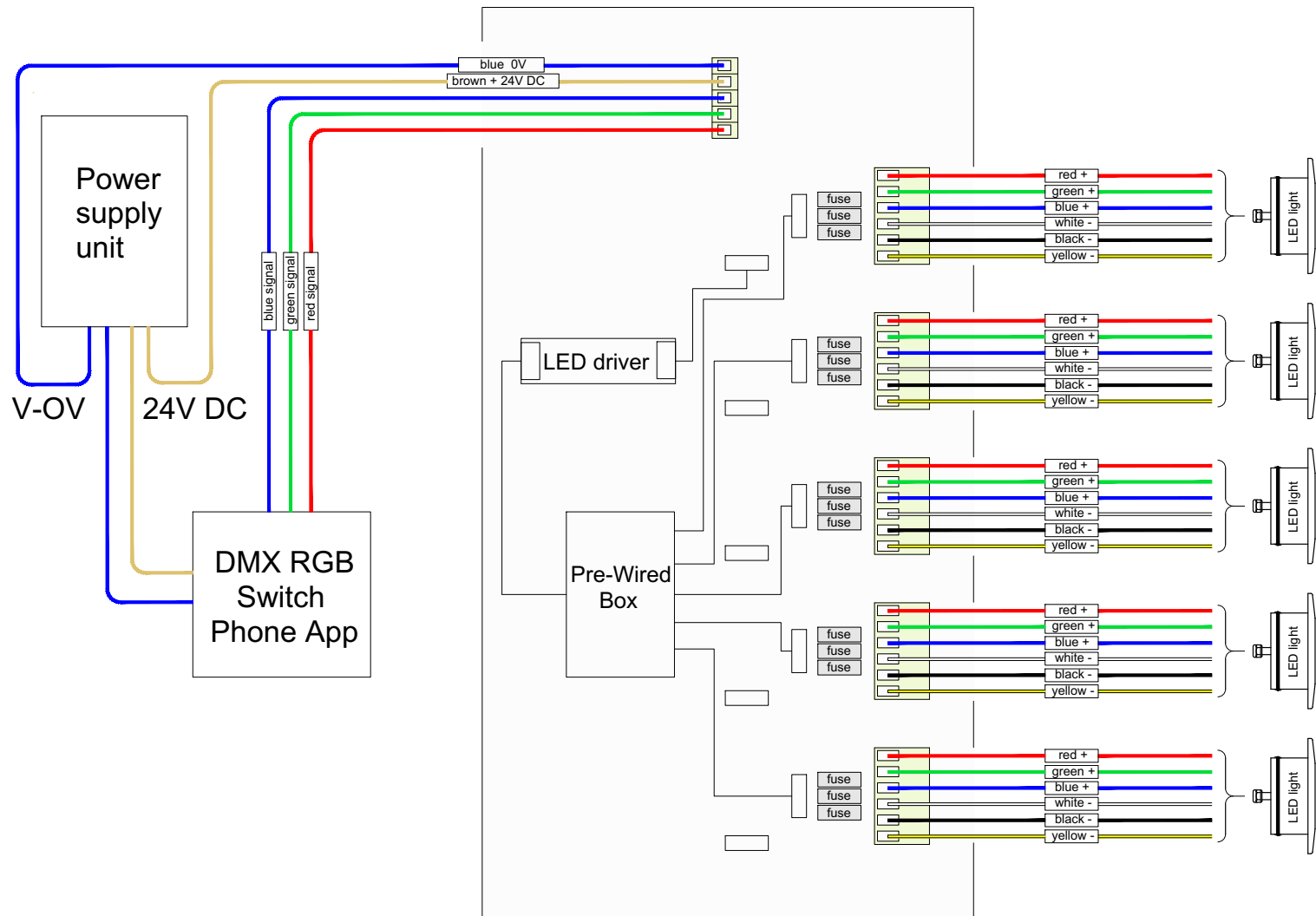


5 Way RGB Driver Box

WT4-5 RGB Driver Box.

- Water-tec has designed the RGB driver box, so all the hard work is done for you. This will allow the installer quick and simple installation.
- The main function of the driver box is to cut-out miss wiring and to protect the LED lamps with Protection fuse.
- To the rear of the box you have two cables. The two-core cable is the power in Brown +24V DC and Blue 0V.
- Second is the black three-core indicated with the Red Green Blue signal cables which go directly to the RGB switch, Bluetooth or DMX controls.
- There are four versions 2-Way 3-Way 4-Way or 5 Way connection.
- Box dimensions Height-110mm Width-235mm Length-280mm



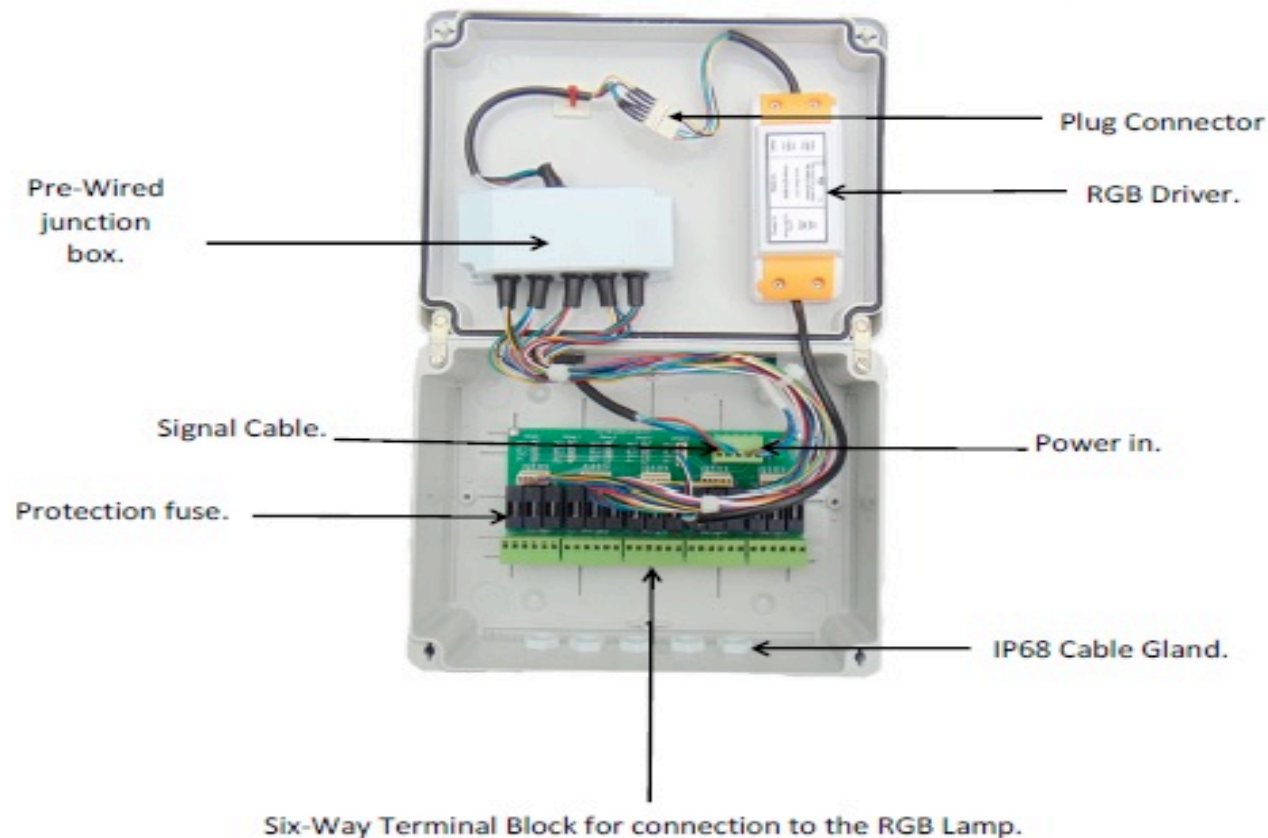


5 Way RGB Driver Box Wired in Series

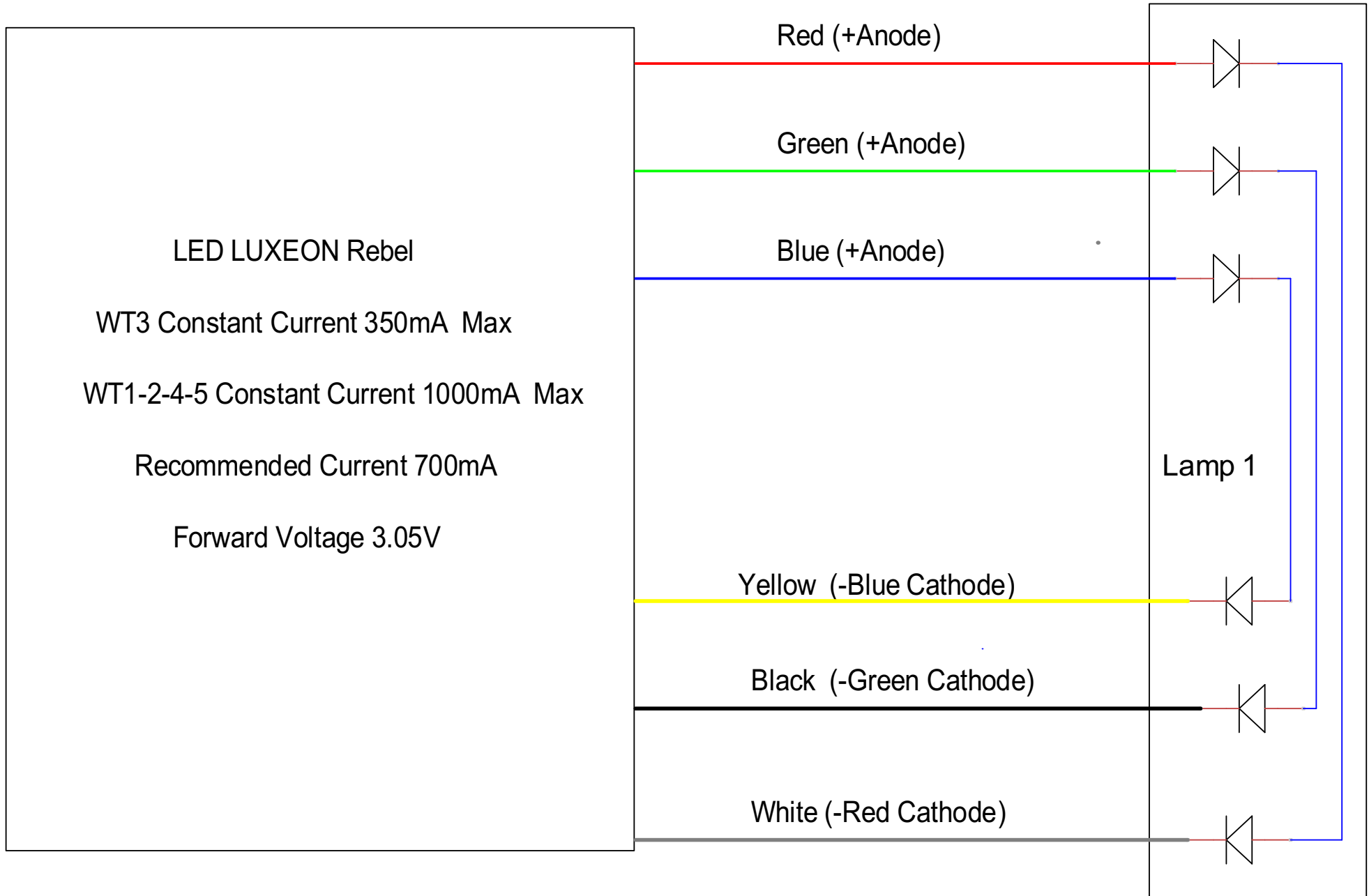
It is essential that all connections are waterproof

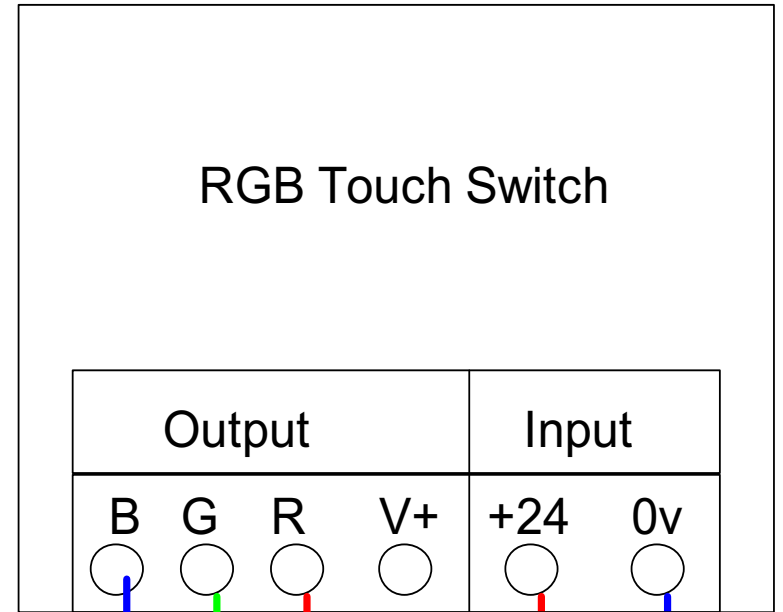
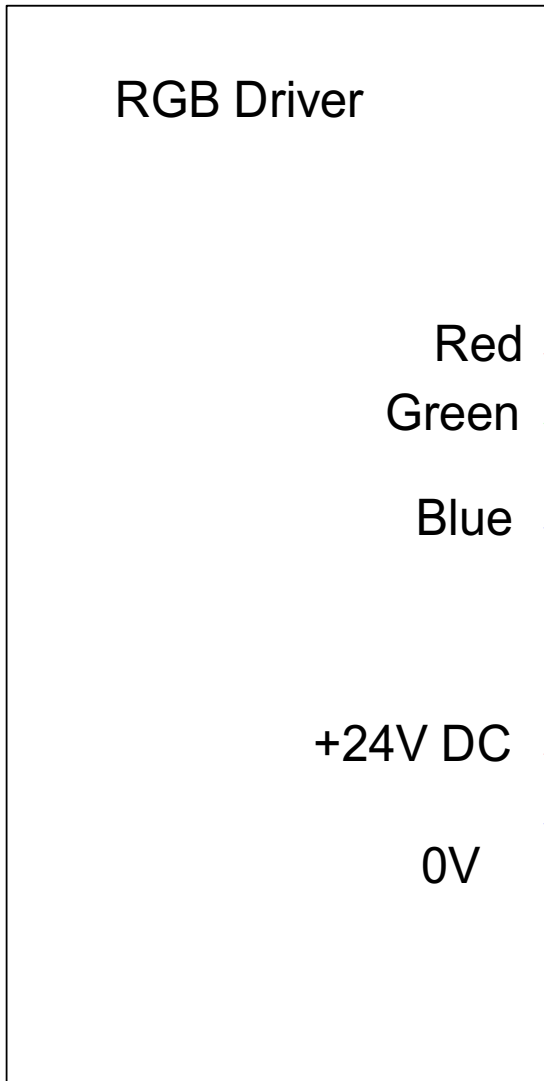
WT1-2-3 RGB Pre-Wired Driver Box.

- Water-tec has designed the pre-wired RGB driver box, so all the hard work is done for you. This will allow the installer quick and simple installation.
- The main function of the driver box is to cut-out miss wiring and to protect the LED lamps with Protection fuse.
- To the rear of the box you have two cables. The two-core cable is the power in Brown +24V DC and Blue 0V.
- Second is the black three-core indicated with the Red Green Blue signal cables which go directly to the RGB switch, Bluetooth or DMX controls.
- There are four versions 2-Way 3-Way 4-Way or 5 Way connection.
- Box dimensions Height-85mm Width-170mm Length-220mm

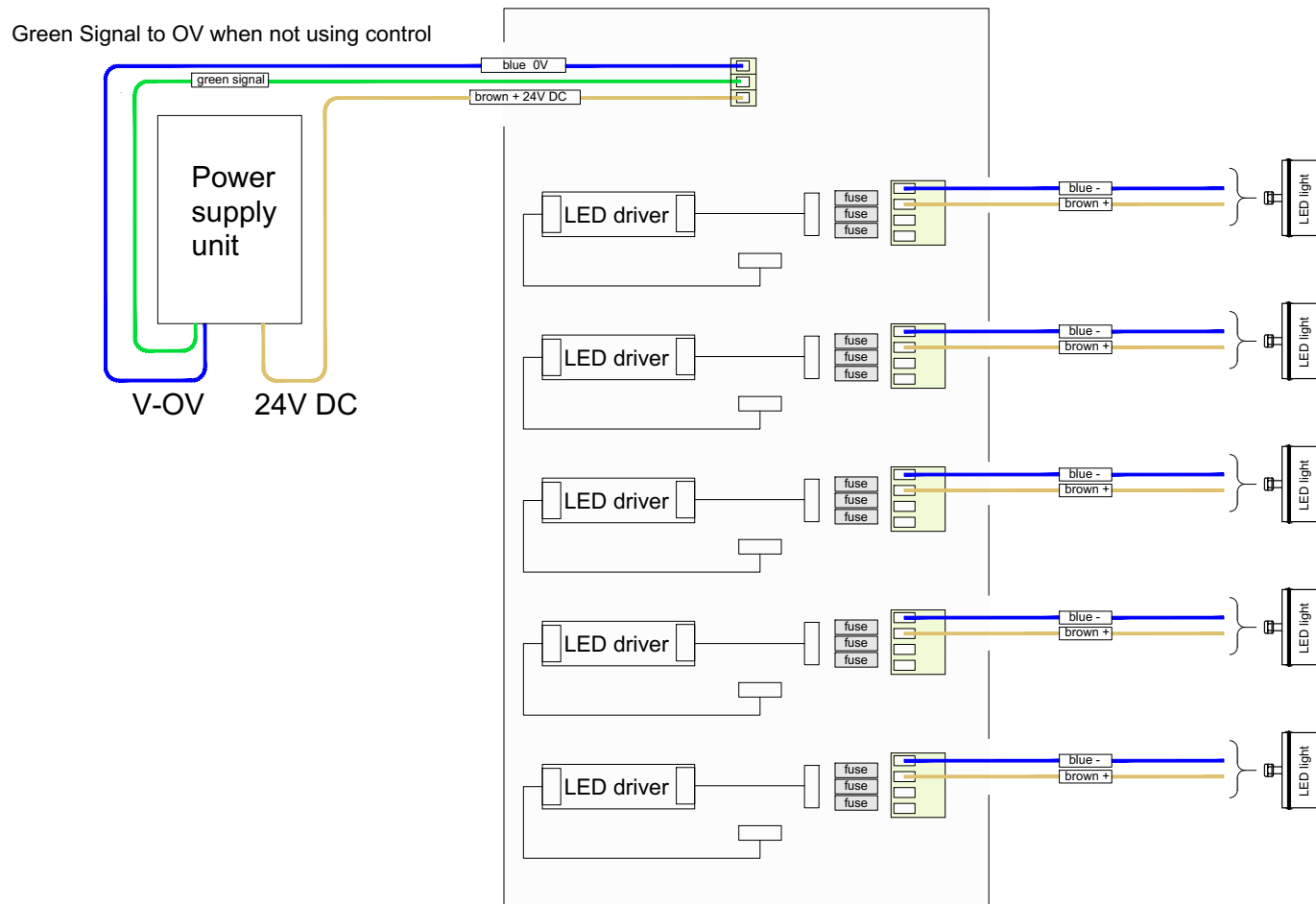


RGB Single Lamp



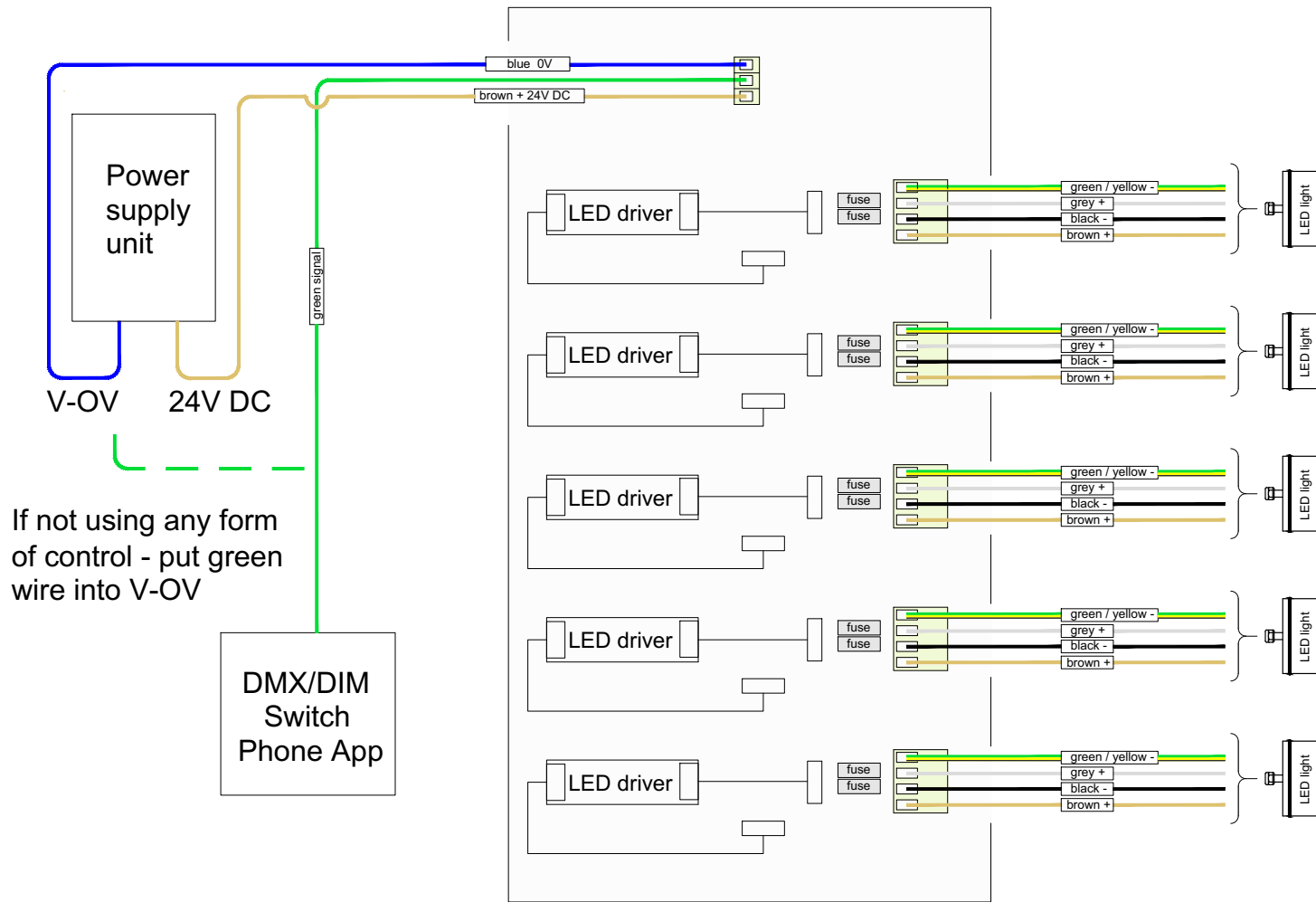


0V +24V DC



WT1 & WT2 White Driver Box NO Control

It is essential that all connections are waterproof

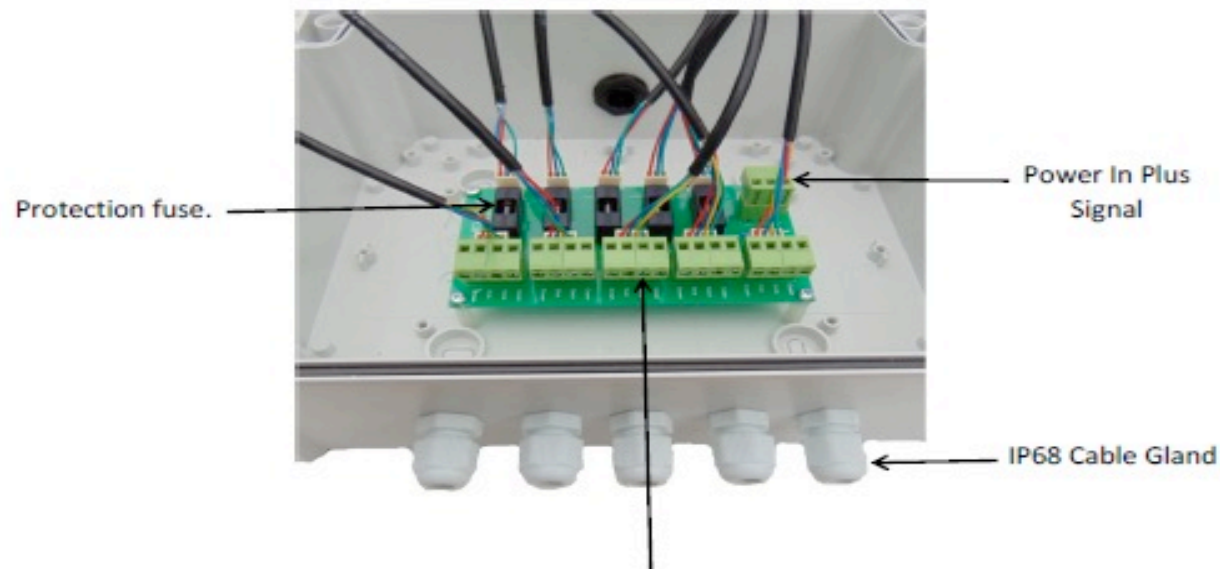


5 Way WHITE Driver Box WT4 & WT5

It is essential that all connections are waterproof

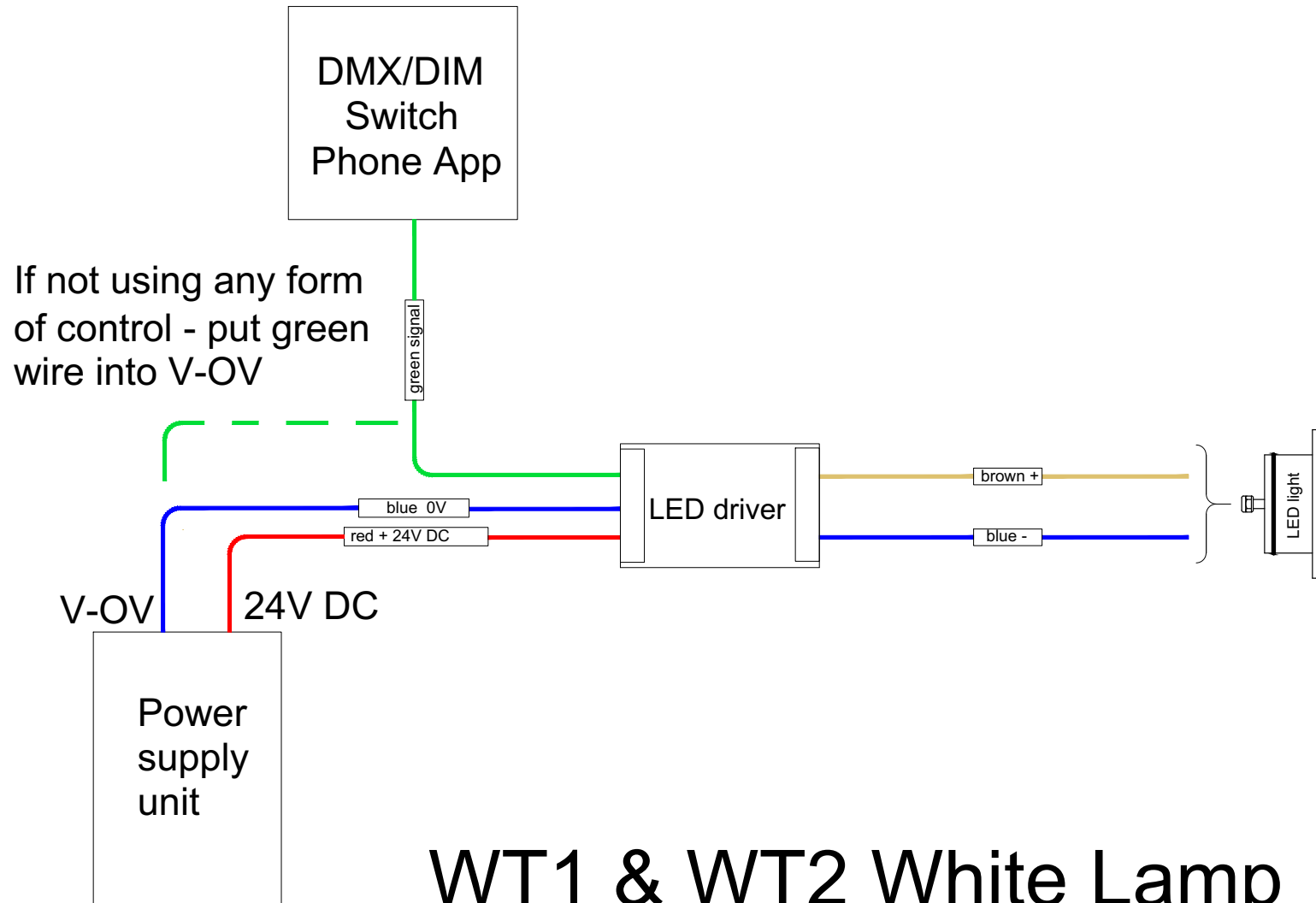
WT1-2-4-5 White Driver Box.

- Water-tec has designed the white driver box, so all the hard work is done for you. This will allow the installer quick and simple installation.
- The main function of the driver box is to cut-out miss wiring and to protect the LED lamps with protection fuse.
- The power in plug has three terminal points Power in +24V DC 0V and Signal for Dim switch or DMX controls.
- There are four versions 2-Way-3 Way-4 Way or 5 Way connection.
- Box dimensions Height-85mm Width-170mm Length-220mm



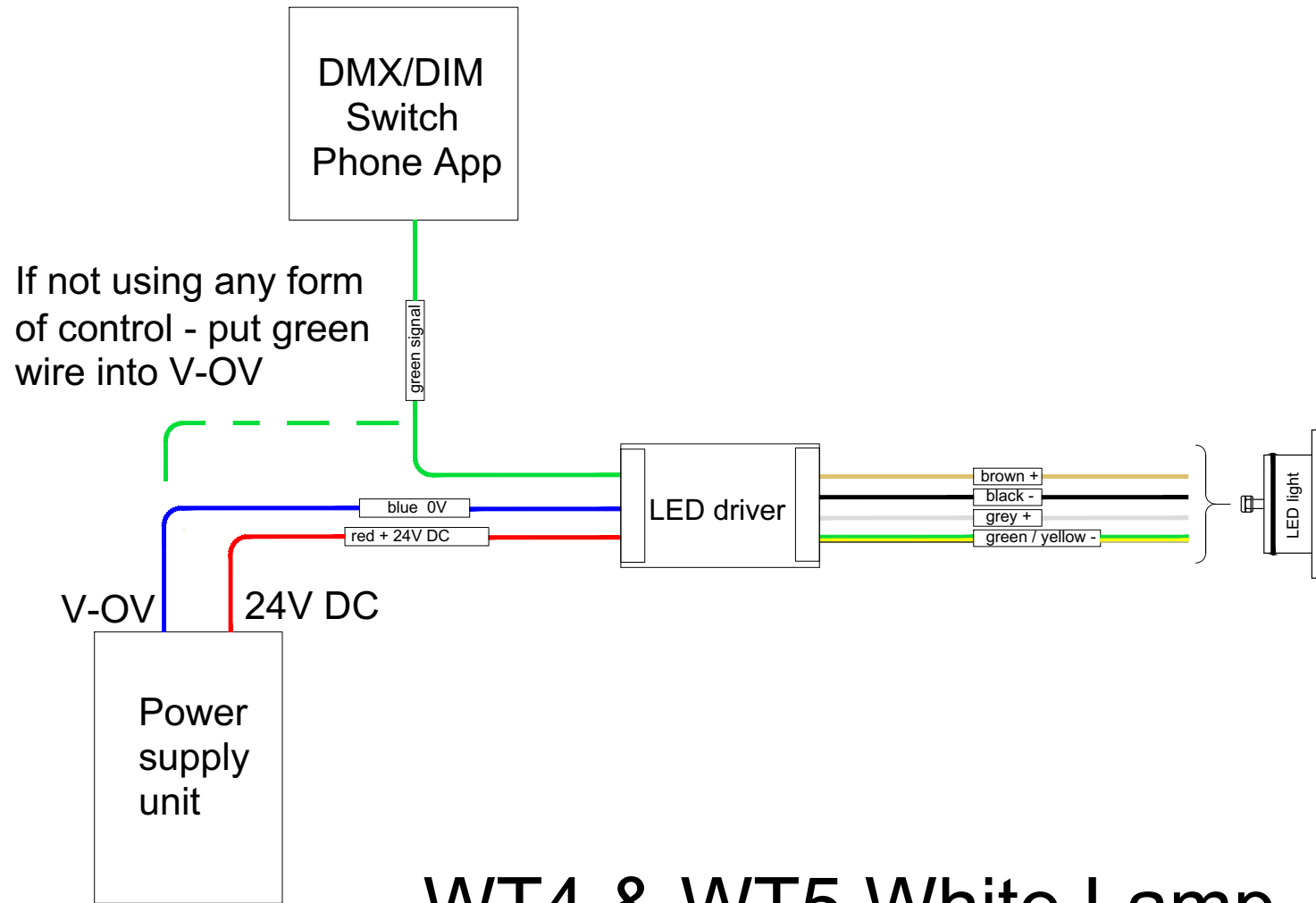
Terminal Block for connection to the White Lamp.

Two Way for WT1-2 Four Way for WT4-5.



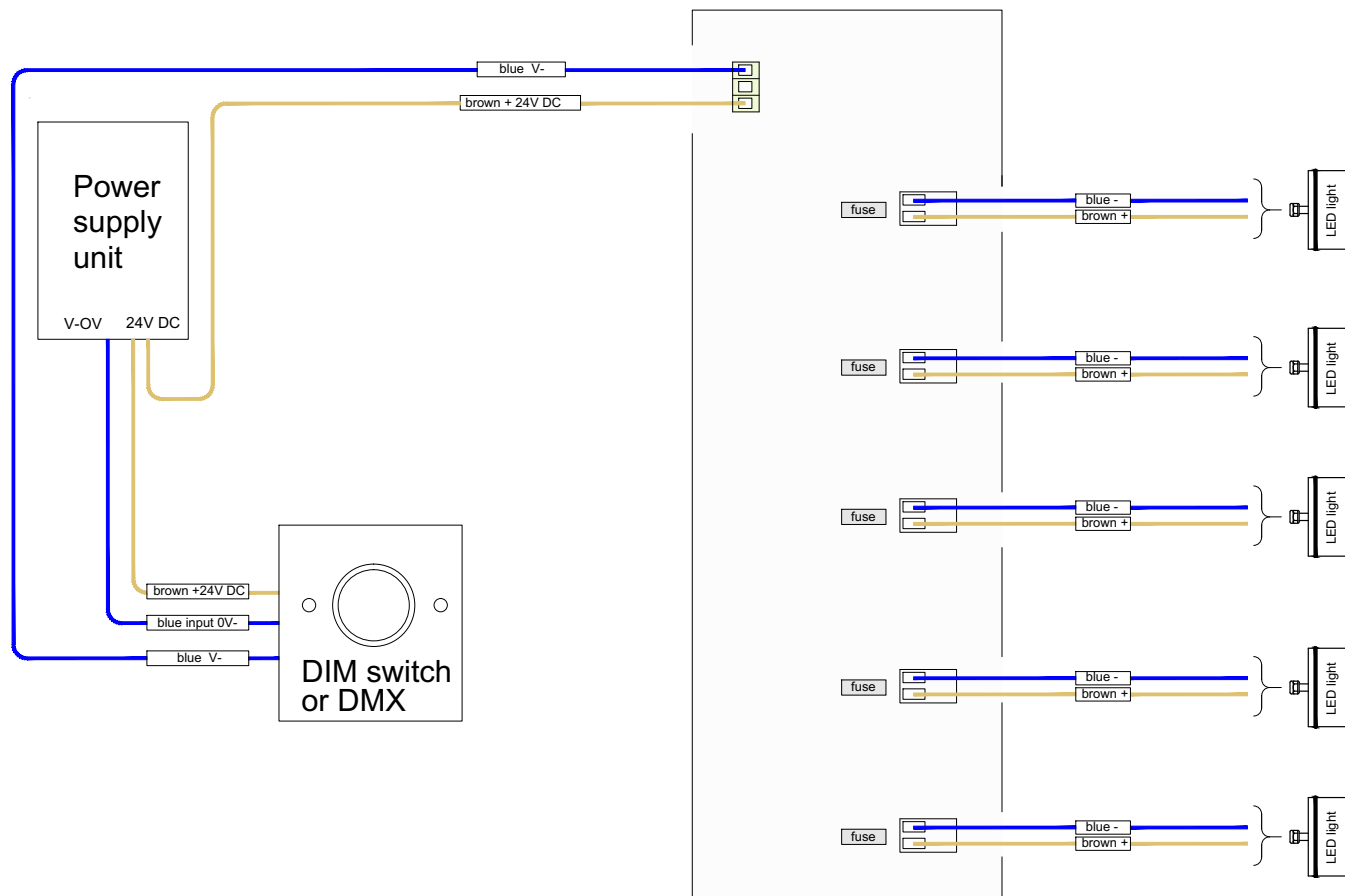
WT1 & WT2 White Lamp

It is essential that all connections are waterproof



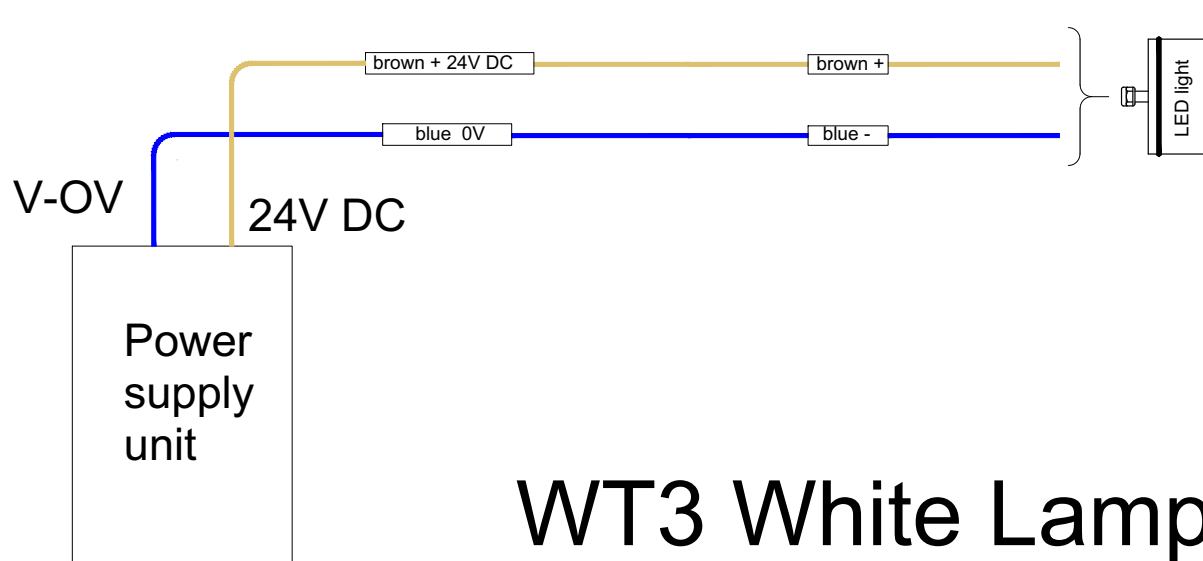
WT4 & WT5 White Lamp

It is essential that all connections are waterproof



WT3 White Driver Box with Control

It is essential that all connections are waterproof

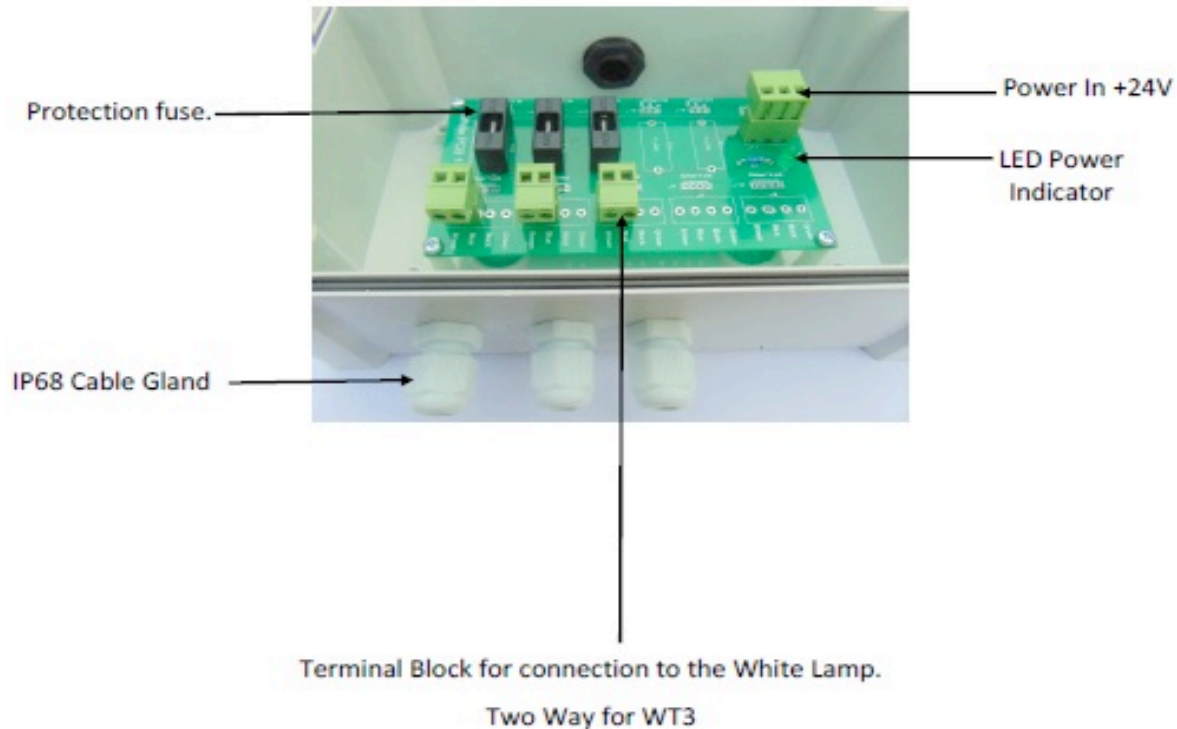


WT3 White Lamp

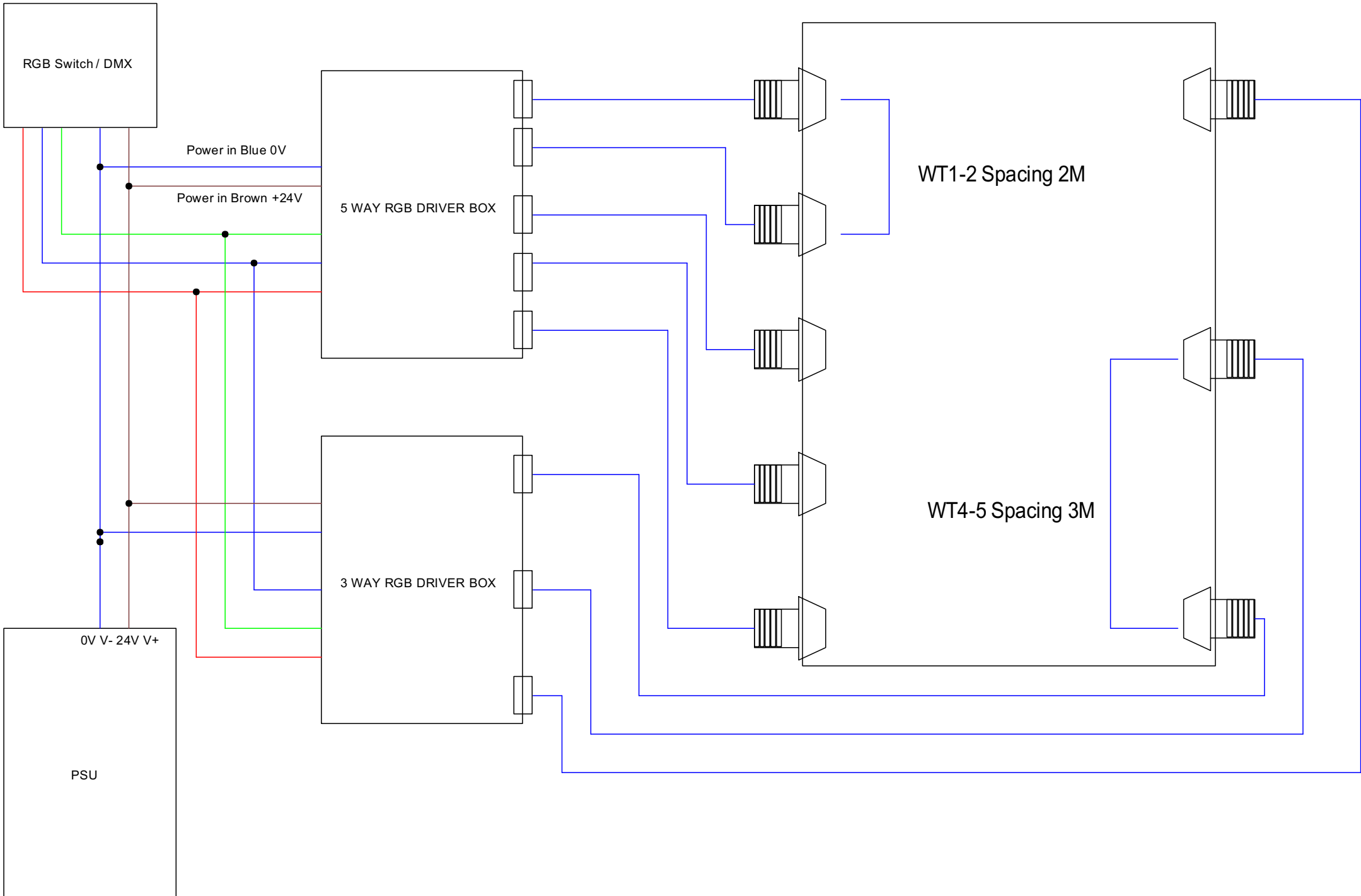
It is essential that all connections are waterproof

WT3 White Driver Box.

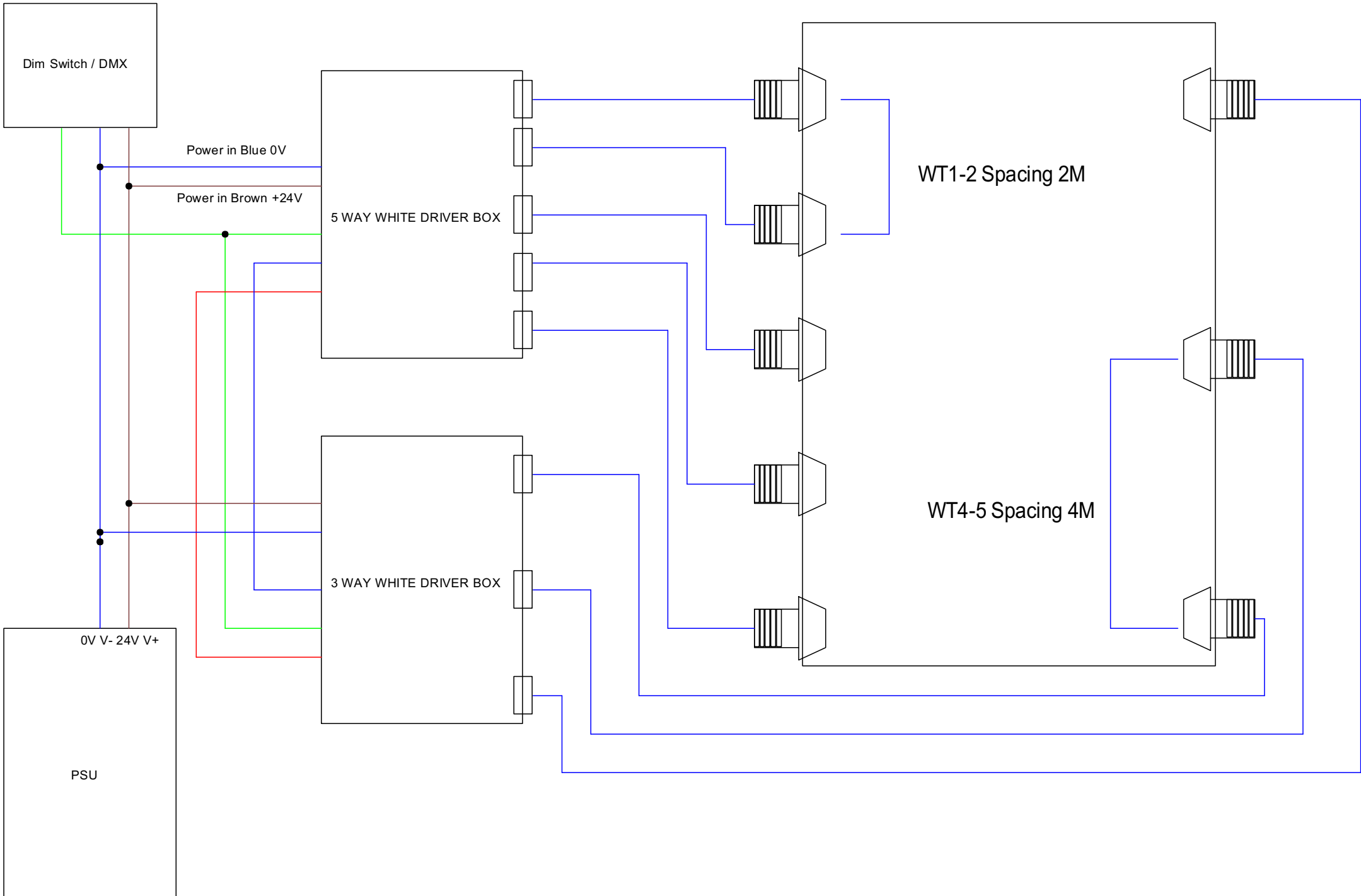
- Water-tec has designed the white driver box, so all the hard work is done for you. This will allow the installer quick and simple installation.
- The main function of the driver box is to cut-out miss wiring and to protect the LED lamps with protection fuse.
- The power in plug has three terminal points Power in +24V DC 0V The WT3 uses the Blue 0V cable if you wish to control via Dim Switch Or DMX
- There are four versions 2-Way-3 Way-4 Way or 5 Way connection.
- Box dimensions Height-90mm Width-120mm Length-185mm



RGB Cable Six Core 20M run



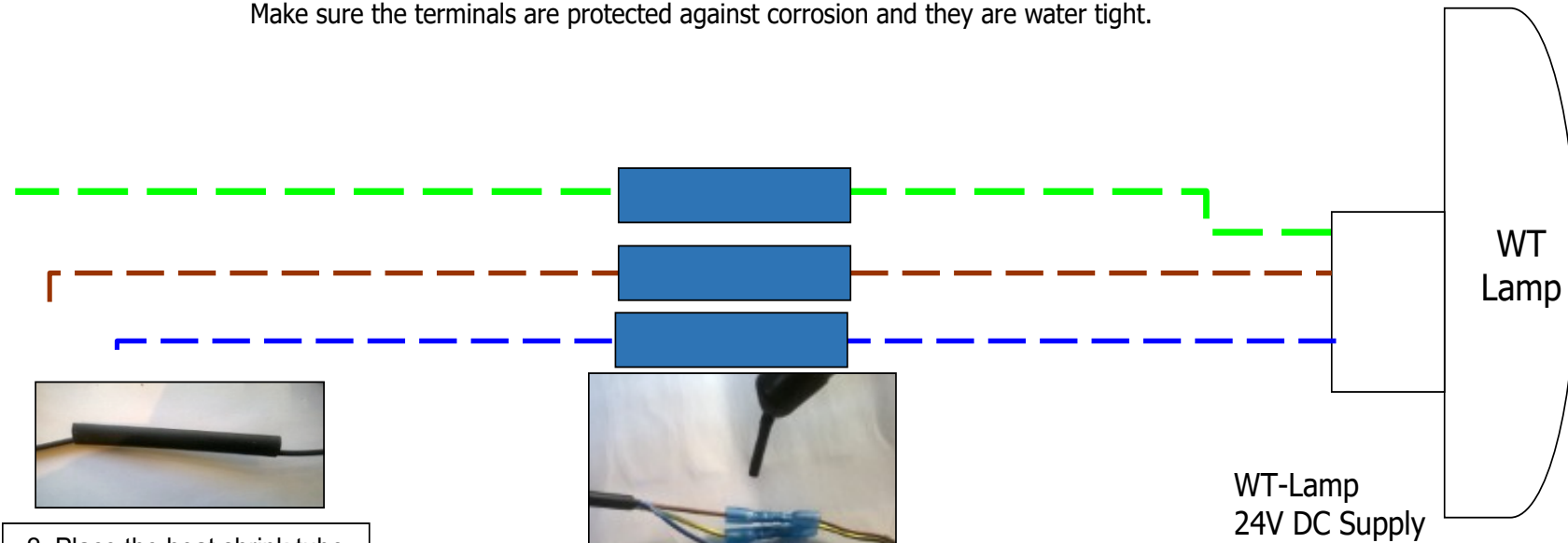
White Cable Two Core 20M run



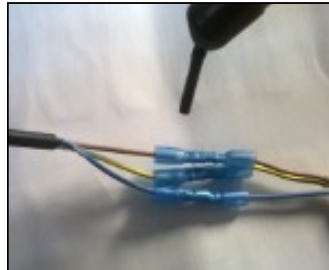
WT-Lamp

Joining connections

Make sure the terminals are protected against corrosion and they are water tight.



2. Place the heat shrink tube over the crimped cable and also over the black insulation



1. Cut cable and strip back black insulation. The 3 exposed wires can then be joined using the heat shrink crimps. Strip the end of each cable to expose the copper cable place the cable into the crimp, using a crimping tool crimp the end. Once all cable have been joined heat shrink the crimps



3. Put silicon sealant into the end of the heat shrink tube then heat shrink the tube to cover the cable ends, this will prevent water being pulled up through the cable to the lamp.



MAS Electronics UK Ltd
DRG No: 00013
Tel 01235 536616
Date 01-01-13

TDK-Lambda 150W, 1 Output, Embedded Switch Mode Power Supply

Product Details

150W, Universal Input, Single Output, LS Series

Universal AC input 88-264Vac, LS150 models are switch selectable for 115 or 230Vac

Overcurrent/Overvoltage protection

Power factor correction to EN 61000-3-2

Withstands 300Vac surges (minimum 5s)

Very High efficiency up to 87%

Conducted and radiated EMI: EN55011/EN5502



Note

Operating temperatures are with de-rating

MTBF to MIL-HDBK-217F

Approvals

UL recognised component

Standards

UL 60950-1, EN 60950-1, IEC 60950-1

Output Voltage 24 V

Output Current 6.5A

Power Rating 150W

Input Voltage 248 → 273V dc

Number of Outputs 1

Package Type Enclosed

Ripple And Noise 120mV

Load Regulation 192mV

Line Regulation 96mV

Minimum Temperature -25°C

Maximum Temperature +70°C

Efficiency 86%

MTBF 505393h



20 x 30 x 13cm door enclosure that is manufactured from ABS to **IP65**. Supplied with a blank, lockable door this enclosure.

- Tough enclosures for a wide range of uses
- Supplied with lockable, blank doors
- Robust door hinges
- Fitted with galvanised steel back plate
- Door locks fitted as standard, key supplied
- Supplied with wall-mounting brackets
- Sealed to **IP65**

How to connect to FreeColor Phone App

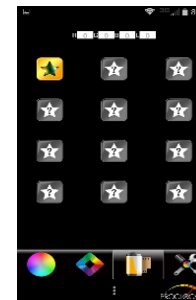
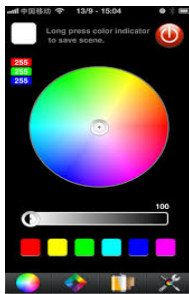
How to connect to RGB-WiFi

Step 1. First you need to download the App **FreeColor**



Step 2. You need to connect to the WiFi go to your WiFi settings find **HX001** and connect.

Step 3. Open the **FreeColor**, the first page is your Color wheel second page is your mode settings third page is your saved settings.



More information can be found in the booklet or online

About the Smart WiFi LED Controller:

"PPCS NEW WIFI-V01 controller appeared with the installation of controlling software on mobile devices with Android or IOS system, it can remote control LED lighting products through WiFi, which makes LED control more intelligent and humanization. One WIFI-V01 controller can be used as dimmer, CT controller, and RGB controller, only need to select the right control interface in the software. In addition, this model has DIY function. Users can get any effect they want based on our controlling software. If you don't have any mobile devices with the controlling software at hand, you could also use our RF remote control to control it. This model designed for constant voltage led products, such as led strip, led modules. For controlling more led products, amplifier is available."

How to connect to Magic Home Phone App

How to connect to RGB-Wi-Fi

Step 1. First you need to download the App **Magic Home**



Step 2. You need to connect to the Wi-Fi go to your Wi-Fi settings, find **LEDnet994164** and connect.

Step 3. Open the **Magic Home App**, the first page is your Colour

Along the bottom of the screen are the various functions.

Colours: for manual RGB colour change.

CCT: for white light dim control

Function: for auto colour change.

Music: for selecting the lights to work along with music.

Customs: for creating your own colour mode.

MIC: for sound application working with the lights.

Camera: to capture colours to change the lights.



Bluetooth Magic Light – BLE Phone App

This is a application software with built-in Bluetooth, version 4.0 and android OS 4.3.

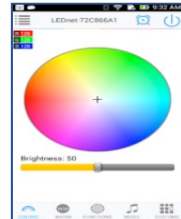
Step 1. Download the **Magic light-BLE** app from the play store onto your phone or tablet.



Step 2. Turn on your Bluetooth and open the Magic home app.



Step 3. Tap on the device and your colour wheel screen will show.



Step 4. You can pick a static colour from the colour wheel, alternatively scroll along the bottom to choose Functions, Music, Customs, Disco, Camera, Scene.

This controller support iOS 6.0 version and Bluetooth version 4.0 or above.

There are 16 million colours and dozens of lights changing modes.

This controller is designed for LED strips, module etc. After easy installation and setting up, you can use your Phone (iOS 6.0 or Android system for Samsung 4.3 version or above) to control.

The remote-control distance reach 8-10 meters.

Specifications:

Connection Methods: UFO Bluetooth Version 4.0

Suitable Phone OS: iOS version 6.0 above, Bluetooth version 4.0 or above

RGB

Please note: When using the touch switch with the WiFi or Bluetooth, you must turn off the RGB switch to use the WiFi or Bluetooth.

Both cannot work together at the same time.

Remote control



The function of each button as below:

Name of key	Instruction	Remarks
ON/OFF	ON or OFF in any time	
Pause	Pause or Continue	
Mode	The mode will go to next, when you touch the key each time	9 modes in total.
Speed/Brightness +	The Speed/Brightness will add, when you touch the key each time	Speed for dynamic modes, Brightness for static modes.
Speed/Brightness -	The Speed/Brightness will subtract, when you touch the key each time	Speed for dynamic modes, Brightness for static modes.
Color Ring	Touch any color which you want	

Please note: When using the touch switch with the WiFi remote, you must turn off the switch to use the remote or turn off the remote to use the switch. Both cannot work at the same time.

Blue Illuminated LED Touch Dim Switch.

Power +24V DC

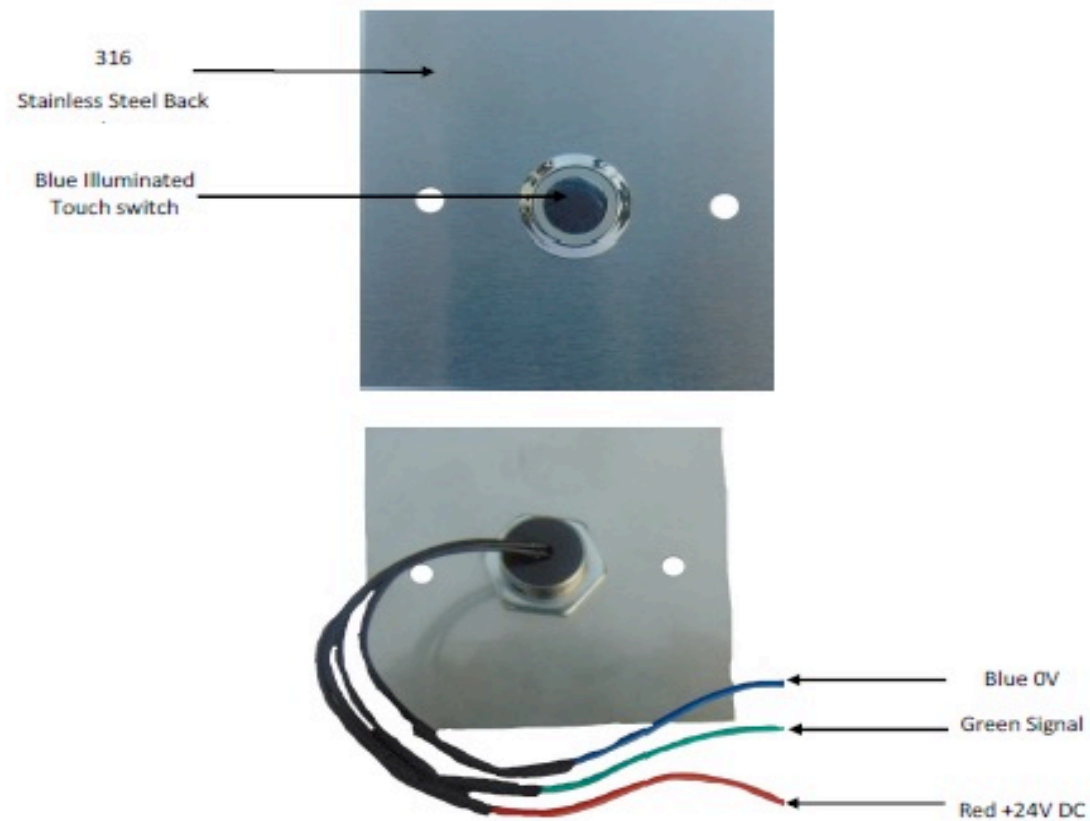
Functions

Short touch On

Short touch Off

Press and hold to Dim down.

To increase brightness press and hold



RGB Touch panel

Specifications:

3 channels DC 12V-24V working voltage 8A

Lock lights to your favourite mode or brightness level immediately

Working voltage: DC 12V - 24V 4 functional buttons with a rainbow colour ring for colours and modes controlling

Working temperature: -20-60°C

Supply voltage: DC 12-24V

Output: 3 channels

Connection type: common anode

External dimension: about 86 x 86 x 37 mm (L x W x H)

Static power consumption: less than 1W

Output current: less than 4A (each channel)

Output power: 12V < 144W, 24V < 288W.

Switchable power supply.

Adjustable lighting colour, brightness.

Mode

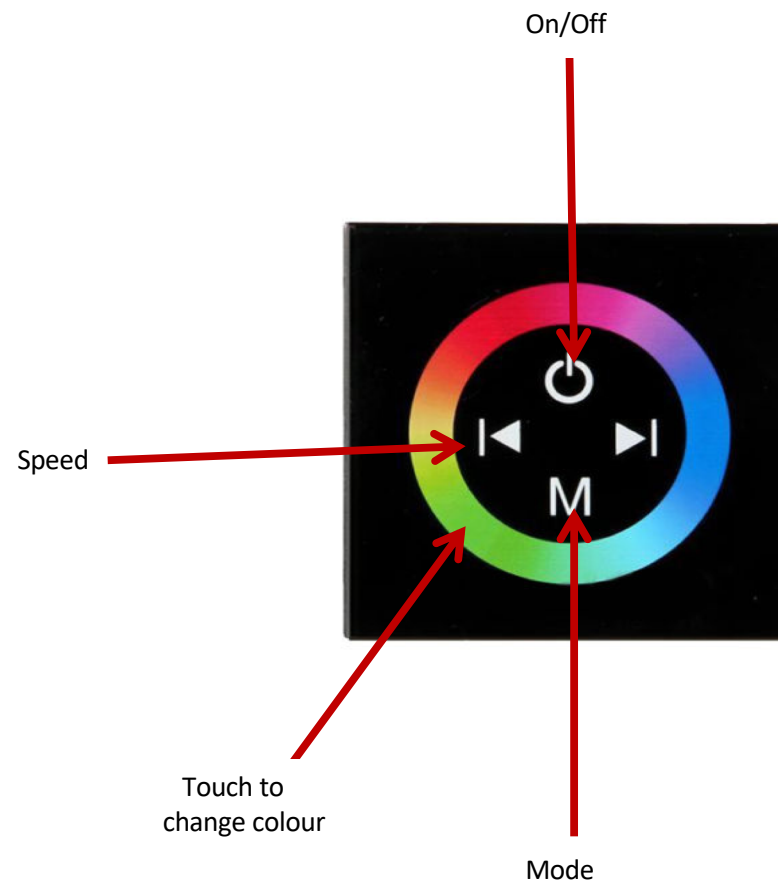
The Mode button offers multiple choice of changing colour from scrolling to dancing colour change.

Speed

The speed button controls the speed of the scroll change.

On/Off

On/Off powers the lamps on and off



White Touch panel

Features:

Touch panel controller is a new high-quality controller which adopts glass panel design, beautiful and fashionable in appearance.

It adopts high precision capacitance touch control chip, increases the sensitivity of touch panel.

It is used for controlling a variety of LED Lamp, for instance, point source of light, flexible light strip, panel lights, etc.

It has many advantages, such as convenient to connect, easy to use.

Specifications:

Working temperature: -20-60 °C

Supply voltage: DC12~24V

Connection mode: common anode

Static power consumption: <1W

Output current: <4A

Output power: 12V<96W, 24V<192W

Controller size: approx. 8.6 * 8.6 * 3.6cm / 3.3 * 3.3 * 1.4in

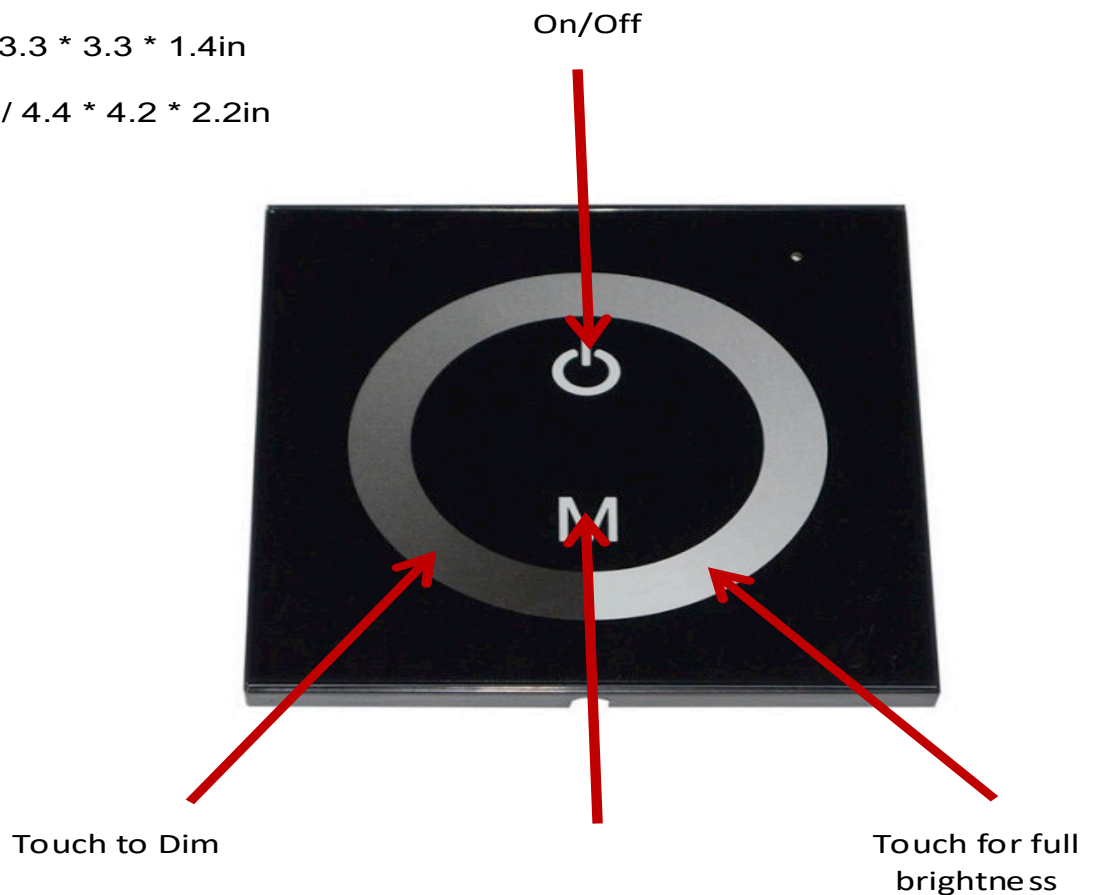
Controller weight: approx. 118g / 4.16oz

Package size: approx. 11.2 * 10.7 * 5.5cm / 4.4 * 4.2 * 2.2in

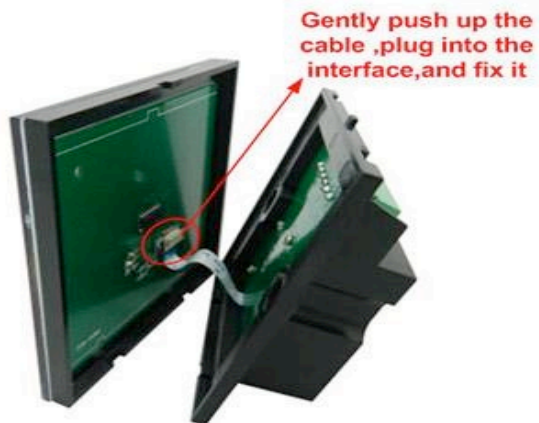
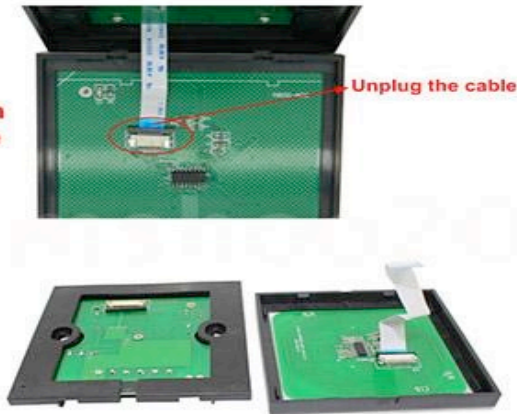
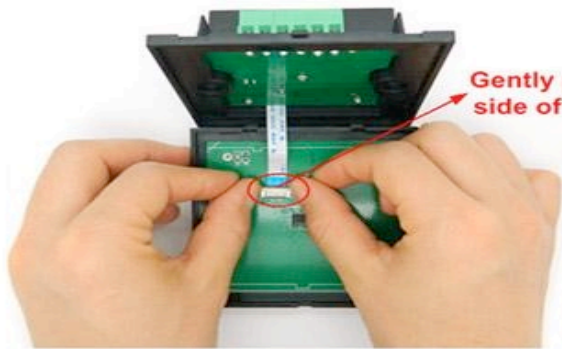
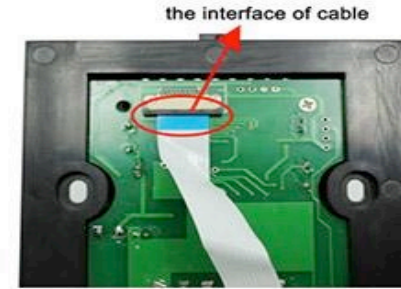
Package weight: approx. 155g / 5.48oz

Standard brightness change

Mode	Function
1	10%
2	20%
3	30%
4	40%
5	50%
6	60%
7	70%
8	80%
9	90%
10	100%

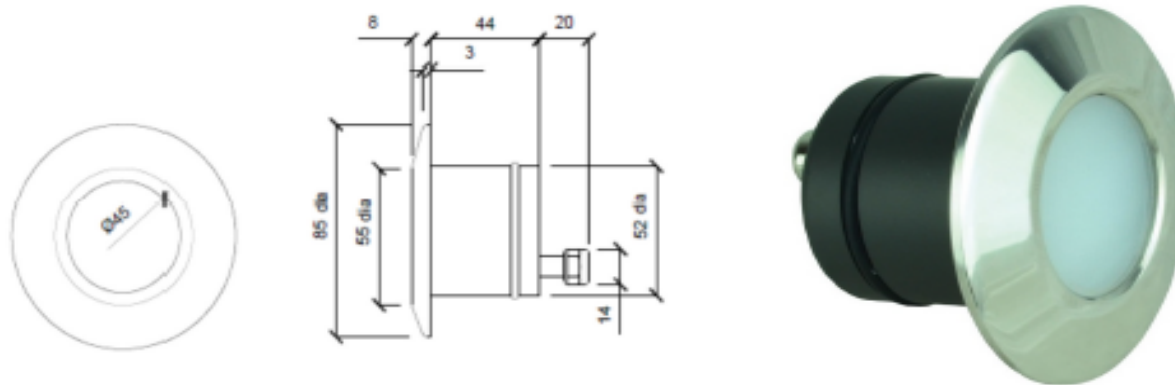


Touch panel installation



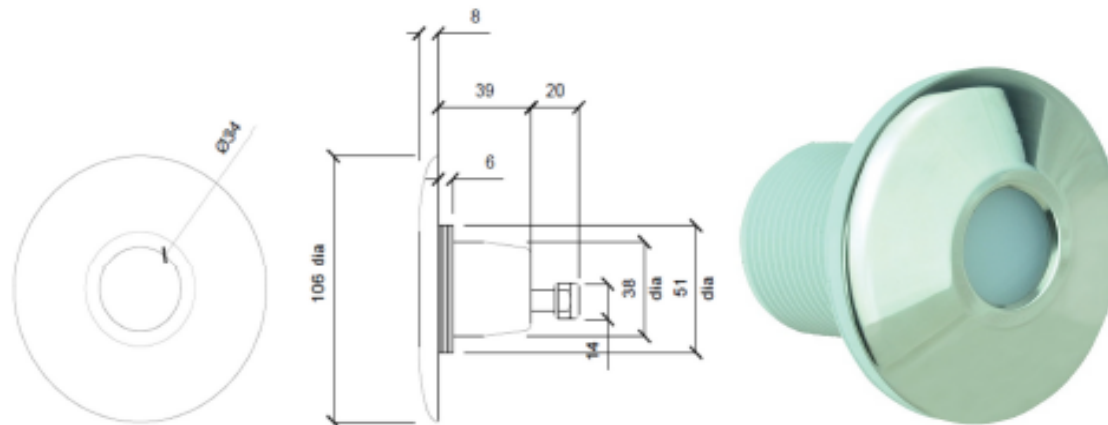
WT1-LED-UWL

Colour	White, Cool Warm White RGB
CCT (K)	(5000K Cool White) (3000K Warm White)
Lumens/Watt @ Current - Test	130lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
White Lumens	1300lm
White Wattage	10W
RGB Wattage	9W-3W per colour
RGB Lumens	Green 172lm Red 137lm Blue 162 Total 471lm
Driver Requirements	500mA Constant current
Light Emitting area	45mm Diameter
Lens Type	Flat, defused
Driver Control White & RGB	PWM
Face Electro plated 316 stainless	85mm
Body 316 stainless	65mm
Fixing 2" pipe	PN9 wall 3.5 I/D53mm
White Cable	2 cores, 0.5mm ² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) 6mm
RGB cable	6-core 7-2-6a PVC insulation 6mm



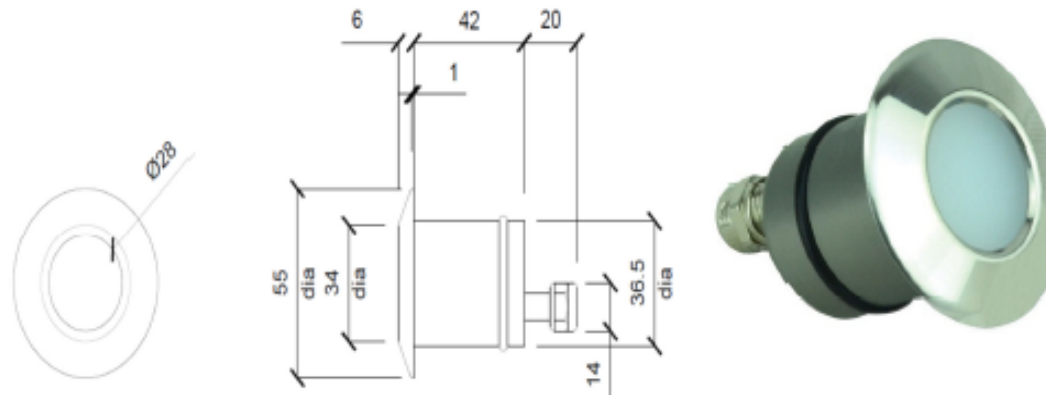
WT2-LED-UWL

Colour	White, Cool Warm White RGB
CCT (K)	(5000K Cool White) (3000K Warm White)
Lumens/Watt @ Current - Test	130lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
White Lumens	1300lm
White Wattage	10W
RGB Wattage	9W-3W per colour
RGB Lumens	Green 172lm Red 137lm Blue 162 Total 471lm
Driver Requirements	500mA Constant current
Light Emitting area	33mm Diameter
Lens Type	Flat, defused
Driver Control White & RGB	PWM
Face Electro plated 316 stainless	(104mm Concrete) (85mm Liner)
Body 316 stainless	65mm
Fixing 2" pipe	PN9 wall 3.5 VD53mm
White Cable	2 cores, 0.5mm ² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) 6mm
RGB cable	6-core 7-2-6a PVC insulation 6mm



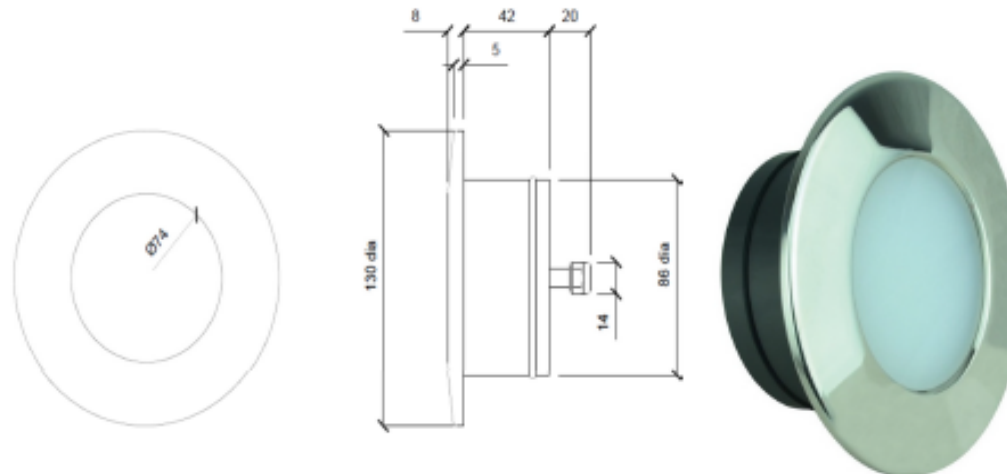
WT3-LED-UWL

Colour	White, Cool Warm White RGB
CCT (K)	(5000K Cool White) (3000K Warm White)
Lumens/Watt @ Current - Test	130lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
White Lumens	390lm
White Wattage	3W
RGB Wattage	3W per colour
RGB Lumens	Green 50lm Red 35lm Blue 35 Total 120lm
Driver Requirements	No Driver required
Light Emitting area	28mm Diameter
Lens Type	Flat, defused
Dimming	Using 0V (Blue Cathode)
Driver Control RGB Only	PWM RGB Only
Face Electro plated 316 stainless	50mm
Body 316 stainless	65mm
Fixing 1.25" pipe	PN12 wall 2.2mm I/D37mm
White Cable	2 cores, 0.5mm ² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) 6mm
RGB cable	6-core 7-2-6a PVC insulation 6mm



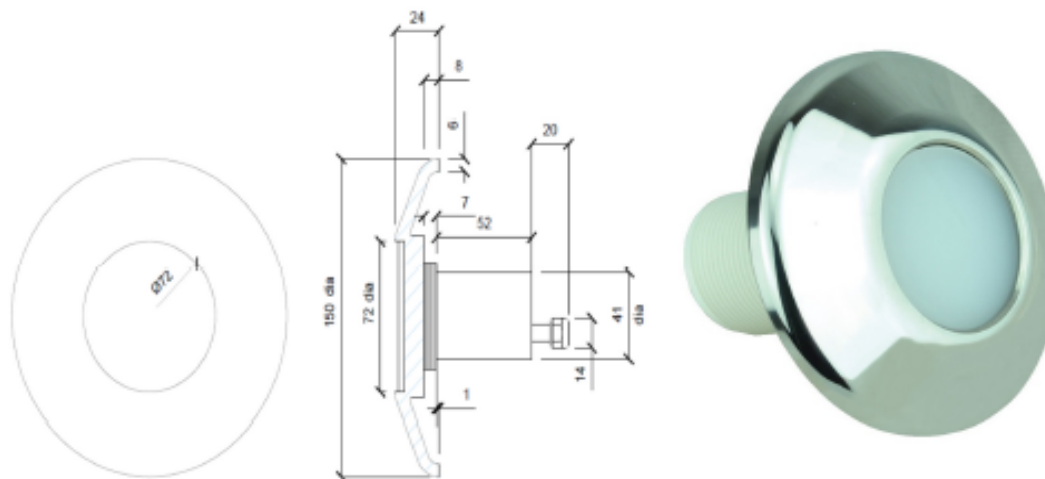
WT4-LED-UWL

Colour	White, Cool Warm White RGB
CCT (K)	(5000K Cool White) (3000K Warm White)
Lumens/Watt @ Current - Test	130lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
White Lumens	2600lm
White Wattage	20W
RGB	10W per colour Total 30W
RGB Lumens	Green 688lm Red 548lm Blue 648 Total 1884lm
Light Emitting area	70mm Diameter
Lens Type	Flat, defused
Driver Requirements	Dual LED 500mA Constant current
Face Electro plated 316 stainless	85mm
Body 316 stainless	65mm
Driver control White & RGB	PWM
Fixing	WT-Niche
Cable	4 cores, 0.5mm ² wire size, 16/0.2mm
LED 1	(Black - Cathode) (Brown + Anode)
LED 2	(Green/Yellow - Cathode) (Grey + Anode) 6mm
RGB cable	6-core 7-2-6a PVC insulation 6mm

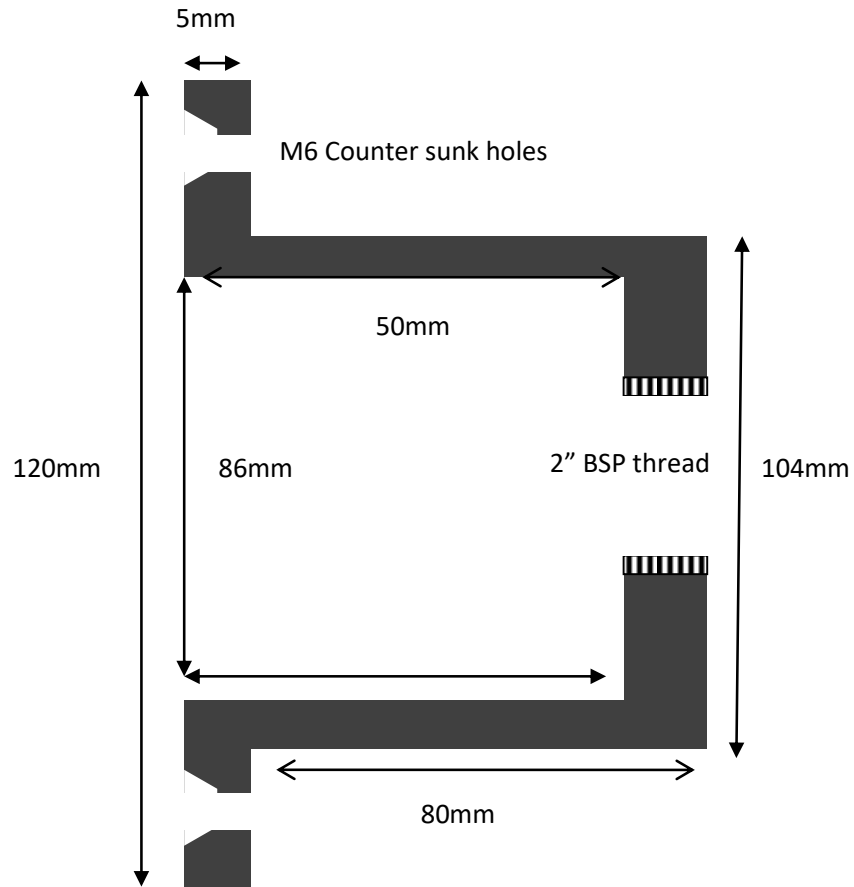


WT5-LED-UWL

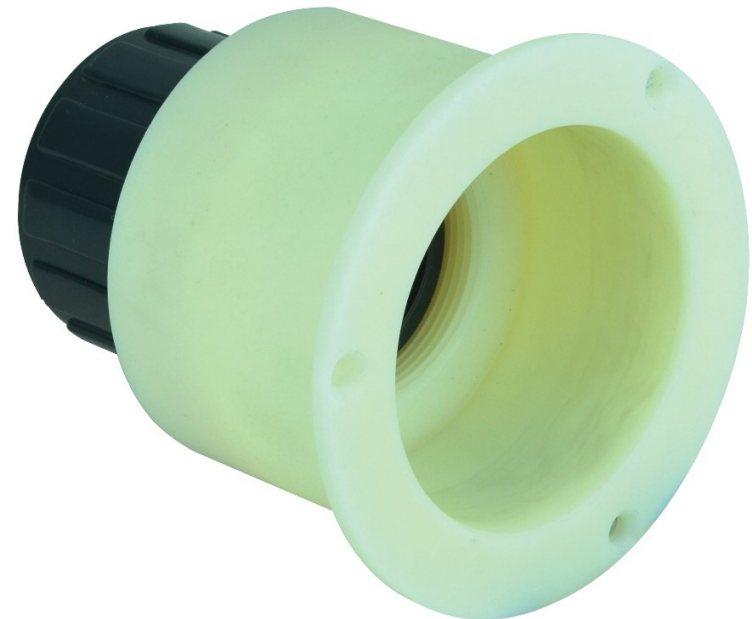
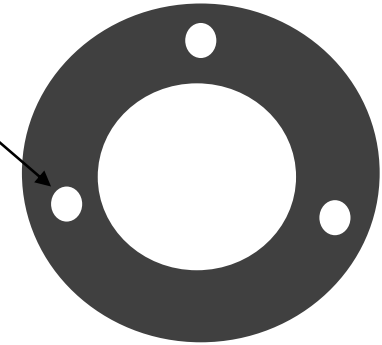
Colour	White, Cool Warm White RGB
CCT (K)	(5000K Cool White) (3000K Warm White)
Lumens/Watt @ Current - Test	130lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
White Lumens	2600lm
White Wattage	20W
RGB	10W per colour Total 30W
RGB Lumens	Green 688lm Red 548lm Blue 648 Total 1884lm
Light Emitting area	72mm Diameter
Lens Type	Flat, defused
Driver Requirements	Dual LED 500mA Constant current
Face Electro plated 316 stainless	150mm
Body 316 stainless	76mm
Driver control White & RGB	PWM
Fixing	Thread fit into 1.5BSP
Cable	4 cores, 0.5mm ² wire size, 16/0.2mm
LED 1	(Black - Cathode) (Brown + Anode)
LED 2	(Green/Yellow - Cathode) (Grey + Anode) 6mm
RGB cable	6-core 7-2-6a PVC insulation 6mm



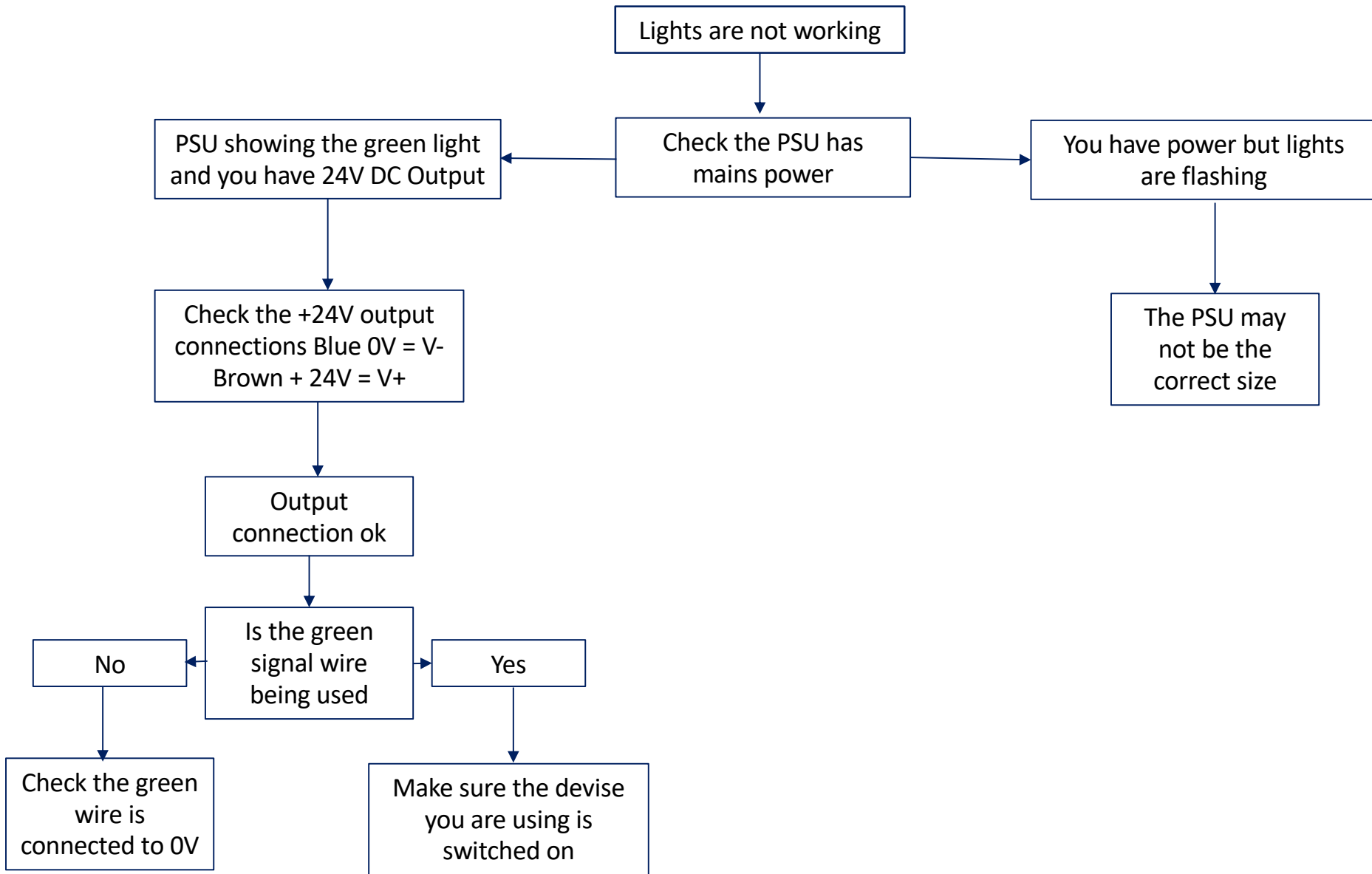
WT4-Niche



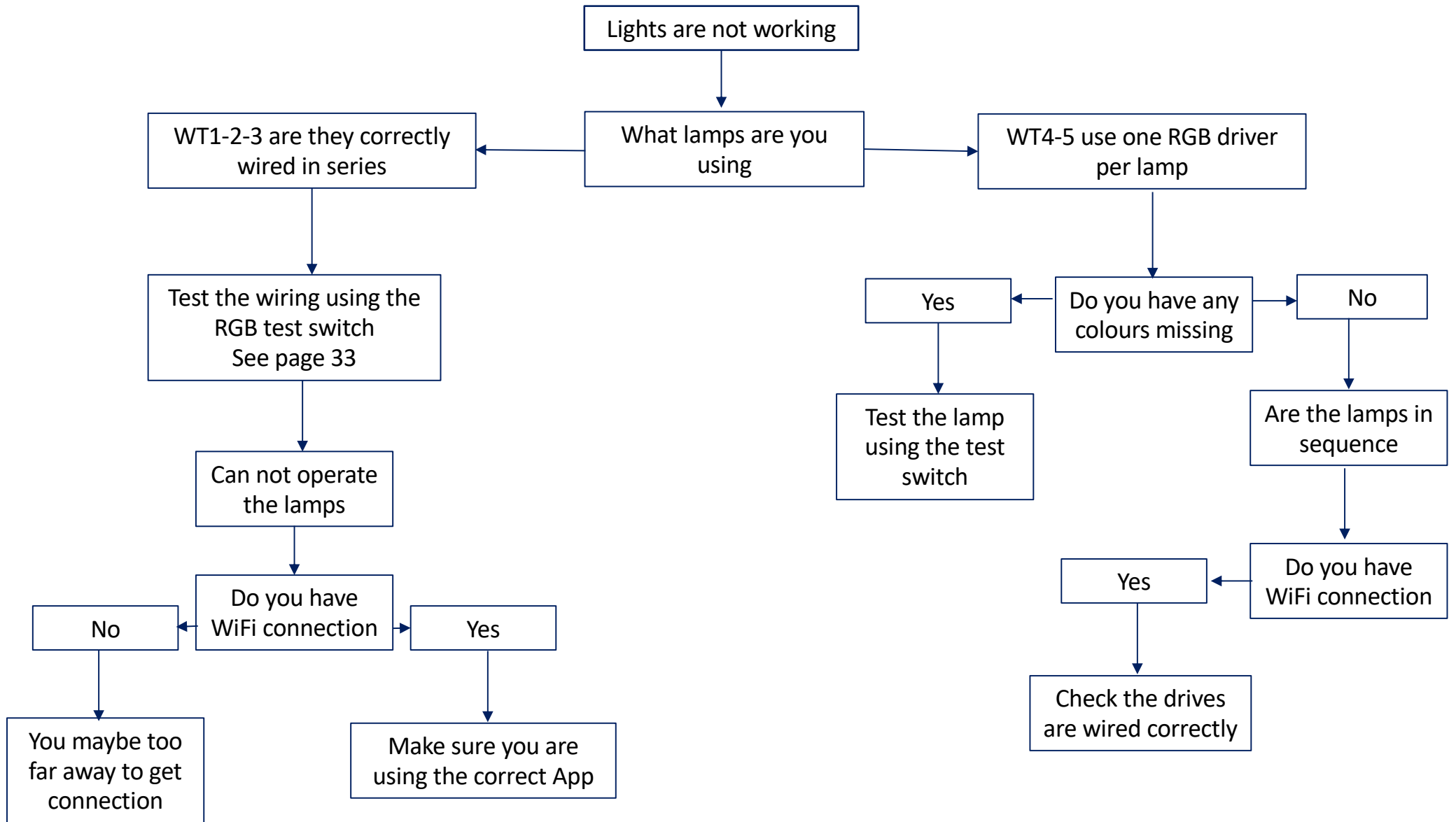
Front 3 x M6 counter sunk holes



Trouble shooting White lights



Trouble shooting RGB lights



RGB Test Switch.

The RGB test switch is designed to test the wiring without subjecting the driver or LED lamp to incorrect wiring and therefore leading to blowing the driver or lamp.

The process of wiring is the same as you would wire up the drivers, this is done in series following the wiring diagram.

The RGB test switch is used in place of the driver to check that all the colours are in sink before you power up the drivers.

Trouble shooting


If the lamps are not correctly wired, then you can have a range of options.

Turn on the Red switch and you see this



Check the Green and blue Common are not swapped


Turn on the Red switch and you see this



Any one colour not working

Check lamp the cable wiring to the colour which is not working

Turn on the Red switch and only the reds work



Check the Blue and green wire at the end of the chain are connected correctly.

The above is a sample of what may occur if the lamps have been incorrectly wire, to sum up if you see a missing colour then check the colour cable which is not working. If all the connections are correct, then test the lamp on its own with the switch to make sure the lamp is functioning correctly

LED lamp in series

Red Line in series



Green Line in series



Blue Line in series



WT-Terms and conditions

Pool Care and maintenance.

You should avoid damage to the lamp by keeping the water at a neutral PH-value. Also the water should be free from metal attacking ingredients to avoid discolouration any material deposits on the lamp must be removed with a suitable non metallic cleaner.

The lamp must not come into contact with any metal effecting cleaners, or acids. Do not use high pressure cleaners directly onto the lamp.

Installation

The Installation of the lamp must be carried out according to the instructions supplied. If any modifications are made to the lamp, the manufacture is discharged from any liability. This includes modifications to the cables; they should not be cut or re-joined. The cables are supplied with the correct lengths specified. If any problems arise after installation by your chosen installer and it is found that the fault was of poor installation the manufacture is discharged from any liability.

The Company accepts no responsibility for any direct or indirect damage as a result, of poor installation.

If the Buyer is overdue in payment for the goods or other goods supplied by the Company, the Company may recover and sell the goods.

If you are not using the WT niche fitting, the manufactures is discharged from any liability. The lamp is equipped with cable lengths requested; the installer must ensure suitable draw wires are installed through the niche/pipe work and conduit.

General

The installation depth should be between 500mm to 700mm. Sufficient cable should be retained in the niche/pipe work to pull the lamp to the surface, and carry out any repairs. The lamps O ring is not a water tight seal therefore we recommend a soft sealant to be placed round the lip of the lamp prior to fitting.

If a lamp should fail then the replacement of an LED lamp should be carried out by a qualified electrician.

WARRANTY AND LIABILITY

(a) Subject to the conditions set out below, the Company warrants that the goods will be free from defects in material and workmanship for a period of 24 months from the date of delivery and shall replace any goods which the Buyer proves to the satisfaction of the Company to be faulty in accordance with this condition.

(b) The warranty given in paragraph (a) is subject to the following conditions.

(i) The Company shall be under no liability in respect of any defect arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, poor installation, failure to follow the Company's instructions, misuse or alteration or repair of the goods without the Company's written approval.

(ii) The Company shall be under no liability under the above warranty if the total price for the goods has not been paid by the due date for payment.

(iii) The above warranty does not extend to parts, materials or equipment not manufactured by the Company, in respect of which the Buyer shall only be entitled to the benefit of any warranty or guarantee provided by the manufacturer thereof to the Company.

(c) Subject as expressly provided in these conditions, all warranties, conditions or other terms implied by statute or common law are expressly excluded to the extent permitted by law.

(d) Except in respect of death or personal injury caused by the Company's negligence (or implied under the Consumer Safety Act 1987) the Company shall not be liable to the Buyer by reason of any representation, implied warranty, condition or other term or under the express terms of the contract for any consequential loss or damage (whether for loss of profit or otherwise), costs, expenses or other claims for consequential compensation whatsoever arising out of the supply of goods and the Company's liability for direct loss (otherwise than for death or personal injury) shall be limited to the value of the invoice for the contract.

WARRANTY AND LIABILITY

All our products are covered by your statutory rights, this warranty is in addition to your statutory rights under either the Sale of Goods Act 1979 or the Supply of Goods and Services Act 1982. If you are unhappy with the service you receive from water-tec.co.uk please contact us immediately in order that we can rectify the situation. We will keep you informed of everything we are doing to correct the situation until the problem has been resolved. This warranty covers a 24 month period from the date of purchase. Conditions apply see below for details.

Warranty Disclaimer

- This warranty takes immediate effect from the date of purchase.
- Water-tec and MAS Electronics UK Ltd are not responsible for any items that have been damaged due to misuse.
- We are not responsible for the installation of the items; installation must always be carried out by a qualified electrician.
- General maintenance on the Lamps must be carried out at regular intervals, to ensure the highest visibility. We do not take responsibility for any maintenance issues.
- The water should be kept at a neutral Ph-value. The water should be free from any metal attacking ingredients to avoid discolouration.
- Material deposits on the lamp must be removed with a suitable non metallic cleaner.
- Items returned and are found to be damaged by any misuse or incorrect fitting; the manufacturers are discharged from any liability. There will also be a charge to replace the item.
- This is a water cooled device; therefore, the lamps should not be run dry for long periods of time.

The warranty will be invalid if any modification